



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON D.C., 20460

MEMORANDUM

Date: September 23, 2010

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DECISION: 421332

**SUBJECT:** Ecological Risk Assessment Addressing the Proposed Registration of Fluazifop-p-butyl for New Uses on Bananas, Plantains, Citrus, Grapes, and Sugarbeets

**FROM:**

N.E. Federoff, Wildlife Biologist  
Wm. J. Shaughnessy, PhD, Environmental Fate Scientist  
Environmental Risk Branch II  
Environmental Fate and Effects Division (7507P)  
Office of Pesticide Programs

*W.J. Shaughnessy for*

*W.J. Shaughnessy*

**THROUGH:** Jean Holmes, DVM, MPH, Branch Chief (Acting)  
Environmental Risk Branch II  
Environmental Fate and Effects Division (7507P)  
Office of Pesticide Programs

*Jean Holmes*

**TO:** Kathryn Montague, Risk Manager  
Registration Division (7505P)  
Office of Pesticide Programs

The registrant, Syngenta Crop Protection, Inc., has submitted an amendment proposing new tolerances for the active ingredient fluazifop-p-butyl (EPA Reg. No 100-1001 as formulated in the end-use product Fusilade DX Herbicide (EPA Reg. No. 100-1070) for use on bananas, plantains, citrus, grapes, and sugarbeets. In response, the Environmental Fate and Effects Division (EFED) has conducted a baseline ecological risk assessment.

In August 2008, EFED completed a risk assessment for fluazifop-p-butyl use on peanuts, dry beans, and soybeans.<sup>1,2</sup> The application rates used in that assessment were essentially the same as those proposed for sugar beets in the current assessment (see Table 1). For the other currently proposed uses (citrus, grapes, bananas and plantains), the previous assessment done on pecans, apricots, cherries, plums, prunes and nectarines can be used. As a result the risk findings

<sup>1</sup> Memorandum from Katrina White, EFED ERBII to Joanne Miller, Registration Division, subj: Ecological Risk Assessment Addressing the Proposed Registration of Fluazifop-p-butyl for New Uses on Peanuts and Dry Beans and Amended Uses on Soybeans

<sup>2</sup> For electronic versions of this assessment see Attachment 1 (w/o Appendices).

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and conclusion of the current assessment will closely match those of the 2008 and 2003 assessments.

**Table 1. Summary Of Application Information For Currently Proposed Uses**

Crop Use Scenario	Application Rate (lbs ai/A)	Maximum Seasonal Rate (lbs ai/A)	Maximum Number of Applications	Application Interval (days) <sup>1</sup>
Bananas & Plantains	0.38	1.14	3	30
Citrus	0.38	1.14	3	21
Grapes	0.38	1.14	3	14
Sugar Beets	0.38	0.76	2	14

Abbreviations: A=acre; a.i.=active ingredient

<sup>1</sup>Time interval between pesticide applications as described in Fluazifop-p-Butyl Tolerance Petition Sect 408(d)(2)(A)(iii).

Further, in the 2008 assessment EFED estimated the environmental exposures to fluazifop-p-acid because the parent rapidly degrades in aerobic environments to its acid form, and therefore, the form most likely to be present in the environment. In the current assessment environmental exposures have again been based on the presence of the parent-acid.

Acute risk is unlikely to birds or mammals. However, chronic LOCs were exceeded for these species. Acute and chronic LOCs were exceeded for estuarine/marine invertebrates. Neither acute nor chronic risks are likely for other aquatic animals. There may be risk to aquatic plants and due to the absence of toxicity data, possible risk is assumed. Since fluazifop-p-butyl is practically non-toxic to honeybees, low risk is assumed.

### **Environmental Fate and Transport Characterization**

The fate and transport characteristics of fluazifop-butyl, its acids and degradates have been extensively detailed in EFED's August 2008 ecological risk assessment. In summary, fluazifop-butyl (PC Code 122805) is the racemic mixture (e.g., consists of equal amounts of the R and S enantiomers) of butyl-2-[4-[5-(trifluoromethyl)-2-pyridyloxy]phenoxy}propionate. Fluazifop-p-butyl (PC Code 122809) is the R enantiomer and is more herbicidally active than the S enantiomer (Tu *et al.* 2001). Both transform primarily via microbial mediated hydrolysis in moist soil and sediments to the fluazifop-acid which can also exist in the R or S form (MRID 162455; 87493, 92067033, 87492, 92067032, 46190602, 46190605). Exposure is primarily expected to be to fluazifop-acid, either in the R or S form (see discussion in Appendix A of EFED's 2008 assessment).

Primary metabolism pathways are aerobic and anaerobic degradation. Three degradates were measured at greater than ten percent of applied or total radioactivity recovered: fluazifop-acid, fluazifop-p-acid, and 2-hydroxy-5-trifluoromethylpyridine.

## **Environmental Exposure Modeling**

In both the 2008 and current assessments exposures to fluazifop-acid were evaluated using modeling because of the absence of targeted monitoring data for previous uses and no monitoring data for the proposed new uses. Estimated exposure concentrations (EECs) in surface water EECs were modeled using Tier II PRZM (Pesticide Root Zone Model; vers. 3.12.2, May 12, 2005) and EXAMS (EXposure Analysis Modeling System; Vers. 2.98.04.06).

EECs generated in the 2008 and the current assessments are presented in Table 2. The difference between the results can be attributed to differences in the crop use scenarios used in the two assessments. For example, the crop use scenarios used in the 2008 assessment included: Michigan Beans (MIbeansSTD), Illinois Beans (ILbeans NMC), Oregon Snap Beans (ORsnbeansSTD), Washington Beans (WAbeansNMC), North Carolina Peanuts (NCpeanutSTD), and Mississippi Soybean (MSsoybeanSTD); and the current assessment uses the following scenarios: Puerto Rico Coffee (PRcoffeeSTD), California Citrus (CACitrus\_WirrigSTD), Florida Citrus (FLcitrusSTD), California Grape (CAGrapes\_WirrigSTD), California Wine Grapes (CAwinegrapesRLF), New York Grapes (NYgrapesSTD), California Sugarbeat\_WirrigOP), and Minnesota Sugarbeat (MNsugarbeatSTD).

**Table 2. Maximum PRZM/EXAMS generated surface water EECs for use of fluazifop-p-butyl in the 2008 and 2010 EFED Risk Assessments**

EFED Assessment	Application Method	EECs (ppb)		
		Peak	21-Day	60-Day
2008	Aerial	27.5	23.1	19.3
	Ground	26.2	22.8	18.5
2010 (current)	Aerial	33.4	28.4	21.7
	Ground	32.4	21.6	21.1

Risks and associated uncertainties found in previous risk assessments conducted by EFED for the uses described above are as follows:

## **Key Uncertainties and Data Gaps**

Appendix A contains the environmental fate studies submitted to fulfill data requirements under 40 CFR Part 158 for terrestrial outdoor uses. A number of data gaps were identified in the 2008 assessment and are yet to be resolved. These include:

- A hydrolysis study (Guideline Number, abbreviated GN, 835.2120) examining the ratio of enantiomers or enantiomer excess in water is needed for fluazifop-p-butyl and fluazifop-p-acid to determine whether fluazifop-p-butyl or fluazifop-p-acid undergo enantiomerization in water as seen for some compounds such as pyrethroids.<sup>2,3</sup>

<sup>2</sup> Lee, P.W. 1989. Hydrolysis of [Chlorophenyl-14C] DPX-GB800 in buffer solutions of pH 5, 7, and 9. Unpublished study submitted by E.I. du Pont de Nemours and Co., Inc., Wilmington, DE. Laboratory Project ID AMR-1185-88. MRID 40999303.

<sup>3</sup> Qin, S, and J. Gan. 2007. Abiotic enantiomerization of permethrin and cypermethrin: effects of organic solvents. *J. Agric. Food Chem.* 55: 5734-5739.

- Aerobic soil metabolism study (GN 835.4100) with fluazifop-p-butyl that identifies the ratio of enantiomers of fluazifop-butyl and fluazifop-acid in an American soil
- Analytical chemistry methods capable of identifying and quantifying each separate enantiomer and fluazifop-butyl and fluazifop-acid in soil, water, and tissue.<sup>4</sup>

Additionally, the following studies are standard data requirements for terrestrial outdoor uses that have not been fulfilled for the proposed uses. Previously, there was a determination that data would not be needed for fluazifop-p-butyl because of the short laboratory half-lives for the compound. However, terrestrial field dissipation studies do indicate that fluazifop-butyl may be present for days to weeks and therefore, a full data set is needed for fluazifop-p-butyl.

- Photodegradation in Water (GN 835-2240) for fluazifop-p-acid
- Leaching and adsorption/desorption (GN 835.1230 or 835.1240) for fluazifop-p-butyl and fluazifop-p-acid in U.S. soils
- Terrestrial Field Dissipation Study (GN 835.6100) examining degradation of all major degradates and that includes an acceptable storage stability study and analytical method validation
- Validation of analytical methods used in field studies
- Storage stability studies to support terrestrial field dissipation studies

All degradation and analytical method studies should state the enantiomeric purity of the chemical used in testing and the enantiomer ratios in the residue characterizations.

Finally, if future environmental toxicology data on 2-hydroxy-5-trifluoromethylpyridine (degrade X) indicate that it is a risk concern; environmental fate data may be needed.

Unfulfilled environmental effects data requirements are presented in Appendix B. A summary of the data gaps follows:

- There are no chronic toxicity data available for the Agency to assess chronic risk of fluazifop-p-butyl to estuarine/ marine fish and invertebrates. However, an acute-to-chronic toxicity ratio (ACR)<sup>5</sup> was developed from existing freshwater animal data and used to extrapolate a chronic toxicity values for these species.
- No toxicity data have been submitted regarding the toxicity of fluazifop-p-butyl to plants. Risks to monocot plants are presumed due to the fact that fluazifop-p-butyl is a selective herbicide intended to control monocot plants. Risks to algae and lichens are presumed in the absence of data.

<sup>4</sup> EFED Interim Policy for Stereoisomeric Pesticides (available at [http://www.epa.gov/oppefed1/ecorisk\\_ders/stereoisomer\\_policy.htm](http://www.epa.gov/oppefed1/ecorisk_ders/stereoisomer_policy.htm)) states, "...Analytical chemistry methods capable of identifying and quantifying each separate enantiomer and chiral transformation products in soil, water, and fish tissue are needed."

<sup>5</sup> Acute toxicity endpoint value ÷ Chronic toxicity endpoint value

- There are no data to evaluate the toxicity of degradate X for any plant or animal. In fate studies, degradate X made up to 37% of applied equivalents. If the toxicity of degradate X is presumed to be as toxic as the parent compound, increased risks to estuarine/marine invertebrates are expected. It is also possible that the acute and chronic LOC's for freshwater fish, estuarine/marine fish, freshwater invertebrates, estuarine marine invertebrates and aquatic plants will be exceeded for the proposed uses.

## **Ecological Risk**

### **Terrestrial Animals**

#### Acute Avian Risk

No acute risks are expected for avian species from the proposed new uses of fluazifop-p-butyl. Acute dietary based risk quotients were 0.04 or less for all proposed uses and did not exceed the Agency's LOC for listed (LOC = 0.1) or non-listed (LOC = 0.5) birds. Acute-dosed based numbers were not calculated because the highest concentration tested (5000 mg/kg-bw) did not produce any toxicity. Because dose-based residue values are below this level no acute effects are expected.

#### Chronic Avian Risk

RQ values using the highest level tested resulted in no exceedences of the chronic LOC (1.0). The RQ values exceeded the Agency's LOC for birds feeding on short grass (RQ = <1.8) when using the highest NOAEC value tested.

#### Acute Mammalian Risk

No acute risks are expected for mammalian species from the proposed new uses of fluazifop-p-butyl. Acute risk quotients did not exceed the Agency's LOC of 0.5 for non-listed and 0.1 for listed terrestrial mammals for any of the proposed uses of fluazifop-p-butyl.

#### Chronic Mammalian Risk

Dose based data show that chronic RQ values exceed the Agency's chronic LOC for mammals feeding on short grass, tall grass, broadleaf plants, small insects, fruits, pods and large insects but not for those feeding exclusively on seeds. Dietary based data show that chronic RQ values exceed the Agency's chronic LOC for mammals.

#### Beneficial Insects

Since fluazifop-p-butyl is practically non-toxic to honeybees, low risk is assumed.

### **Aquatic Animals**

#### Acute Risk

The Agency's LOC's were met or exceeded for acute risks to listed (LOC = 0.05) estuarine/marine invertebrates. The Agency's acute LOC's were not exceeded for any other listed or non-listed aquatic species.

### Chronic Risk

The Agency's LOC's were exceeded for chronic risk (LOC = 1.0) to estuarine/marine invertebrates. The Agency's chronic LOC's was not exceeded for any other species.

### **Chronic risk quotients for fish and invertebrates exposed to fluazifop in the water column from proposed new uses as well as results from the 2008 assessment**

Chronic Risk Quotients					
		Estuarine/Marine Fish <sup>a</sup>	Estuarine/Marine Invertebrates <sup>b</sup>	Freshwater Fish <sup>c</sup>	Freshwater Invertebrates <sup>d</sup>
Application Type and Crop	Crop Scenario	NOAEC = 3.10 mg acid-equiv./L	NOAEC = 0.003 mg acid-equiv./L	LOAEC = 0.203 mg acid-equiv./L	LOAEC = 0.213 mg acid-equiv./L
Aerial	Dry Beans	MI beans STD	<0.01 <0.01	<b>2.76</b> <b>3.27</b>	0.04 0.04
		IL beans NMC	<0.01 <0.01	<b>2.21</b> <b>4.44</b>	0.03 0.06
		OR snbeans STD	<0.01 <0.01	<b>2.49</b> <b>2.08</b>	0.04 0.03
		WA beans NMC	<0.01 <0.01	0.90 0.96	0.01 0.01
	Peanuts	NC peanut STD	<0.01 <0.01	<b>2.01</b> <b>1.85</b>	0.03 0.02
	Soybean	MS Soybean STD	<0.01	<b>2.69</b>	0.03
			<0.01	<b>1.63</b>	0.02
	New Uses		<0.01	<b>9.46 Aerial</b> <b>7.20 Ground</b>	0.14 0.10
	Ground	Dry Beans	<0.01 <0.01	<b>2.32</b> <b>2.82</b>	0.03 0.04
			<0.01 <0.01	<b>3.52</b> <b>4.09</b>	0.05 0.05
		OR snbeans STD	<0.01 <0.01	<b>2.22</b> <b>1.71</b>	0.03 0.02
			<0.01 <0.01	0.51 0.42	0.01 0.01
		Peanuts	<0.01 <0.01	<b>1.64</b> <b>1.39</b>	0.02 0.02
		Soybean	<0.01 <0.01	<b>2.35</b> <b>1.43</b>	0.03 0.02

<sup>a</sup>Bolded RQ values exceed the Agency's chronic LOC (1.0)

<sup>b</sup>Based on ACR of 2.22 derived from *L. macrochirus* data

<sup>b</sup> Based on ACR of 24.13ppm derived from *D. magna* data

<sup>c</sup> Based on Fathead Minnow (*Pimephales promelas*)

<sup>d</sup> Based on Water Flea (*Daphnia magna*)

## Aquatic Plants

No data regarding the toxicity of fluazifop-p-butyl to aquatic plants have been submitted to the agency. However, risks to aquatic monocot plants are presumed due to the fact that fluazifop-p-butyl is a selective herbicide intended to control monocot plants. Risks to dicot aquatic plants are presumed to be minimal due to the chemical's mode of action, no restrictions and no documented incidents. Risks to aquatic algae and ferns are presumed in the absence of data.

## Terrestrial and Semi-Aquatic Plants

Although there are no acceptable data to assess the possible risks of fluazifop-p-butyl to dicot species, risks are presumed to be minimal due to the fact that fluazifop-p-butyl has a mode of action specific to monocot terrestrial plants and is routinely applied to a variety of dicot plant crops at similar application rates and there are no reported incidents of damage to dicot plant species in the EIIS database for registered uses. Similarly, there are no restrictions or advisories against the application of this chemical to dicot plants on the current label. However, risks are presumed for aquatic plants, algae and lichens due to the lack of toxicity data for these species.

## Labeling Recommendations

Based on the proposed uses, environmental fate and transport characteristics, and environmental toxicity endpoints for fluazifop-p-butyl and fluazifop-p acid, the following label advisories are recommended.

### General Terrestrial Outdoor Uses

*For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.*

### Ground Water Advisory

*Fluazifop-p-butyl is known to leach through soil into ground water under certain conditions as a result of label use. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow*

### Surface Water Advisory

*This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several days to months or more*

*after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of fluazifop-p-butyl from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur.*

#### **Environmental Hazards**

*This product is toxic to fish, other aquatic animals and may be toxic to aquatic plants. Do not apply directly to water, to areas where surface water is present, to intertidal areas below the mean high water mark or to areas where runoff into water bodies is expected. Do not contaminate water when disposing of equipment washwaters. Do not apply when weather conditions favor drift from target areas.*

*This product is toxic to grasses and other monocot plants. Minimize exposure to non target plants and do not apply when weather conditions favor drift from target areas.*

#### **Endangered Species**

A listing of endangered species that may be exposed under the current uses is presented in Appendix C.

## Appendix A

### Summary of fate data requirements for fluazifop-p-butyl and fluazifop-p-acid.

Guideline Number	Study Description	40 CFR § 158 Requirements: Terrestrial Outdoor Use	MRID Number (chemical) <sup>1</sup>	Classification	Are more data assessment?
<b>Degradation Studies – Laboratory</b>					
835.2120	Hydrolysis	Required	41598001 (butyl) 46190601 (acid)	Acceptable Acceptable	Yes, the ratio of butyl and acid at the racemic mix hydrolysis rate (rate for the race)
835.2240	Photodegradation in water	Required	42543202 (butyl)	Unacceptable	Pending, data is Yes for acid
835.2410	Photodegradation on soil	Required	41598002 (butyl)	Acceptable	No for butyl Yes for acid
835.2370	Photodegradation in air	Conditionally required	No data	Not applicable	No due to low v
<b>Metabolism Studies – Laboratory</b>					
835.4100	Aerobic soil	Required	162455 (butyl) 46190602 (acid)	Not classified in DER Supplemental due to no material balance and transformation products not addressed	Yes for butyl No for acid because racemic mixture
835.4200	Anaerobic soil	Required	No data	Not applicable	No, data is avail
835.4300	Aerobic aquatic	Required	46190605 (acid)	Acceptable	No
835.4400	Anaerobic aquatic	Required	No data	Not applicable	No, used data for absence of data
<b>Mobility Studies</b>					
835.1230 835.1240	Leaching and adsorption/desorption	Required	46190603 (acid) 46190604 (butyl)	Supplemental due to insufficient mass balance and no soil with <1% organic matter. All soils were foreign soils. Unacceptable due to heat sterilized soils	Yes for butyl and acid
835.1410	Volatility – laboratory	Conditionally Required	No data	Not applicable	No due to low v
835.8100	Volatility – Field	Conditionally required	No data	Not applicable	No due to low v
<b>Dissipation Studies - Field</b>					
835.6100	Terrestrial	Required	No data	Not applicable	Yes, a field diss evaluates major degradate X, wt % of applied equiv metabolism stuc
835.6200	Aquatic (sediment)	Conditionally	No data	Not applicable	No

## Summary of fate data requirements for fluazifop-p-butyl and fluazifop-p-acid.

<b>Guideline Number</b>	<b>Study Description</b>	<b>40 CFR § 158 Requirements: Terrestrial Outdoor Use</b>	<b>MRID Number (chemical)<sup>1</sup></b>	<b>Classification</b>	<b>Are more data assessment?</b>
		required			
835.6300	Forestry	Not required	No data	Not applicable	No, forestry use
835.6400	Combination and tank mixes	Conditionally required	No data	Not applicable	No
<b>Ground Water Monitoring</b>					
835.7100	Ground water monitoring	Conditionally required	No data	Not applicable	No
<b>Other</b>					
	Analytical chemistry methods capable of identifying and quantifying each separate enantiomer in water		No data	Not applicable	Yes, methods to fluazifop-acid in water are needed studies <sup>3,4</sup>
	Analytical chemistry methods capable of identifying and quantifying each separate enantiomer in soil		No data	Not applicable	Yes, methods to fluazifop-acid in soil are needed
	Analytical chemistry methods capable of identifying and quantifying each separate enantiomer in fish tissue		No data	Not applicable	Yes - methods to fluazifop-acid in tissue are required Interim Guidance
	Validation of Analytical Method and Independent laboratory validation of parent and significant metabolites for soil and water	Required for validation of field studies, e.g., water and soil	No data	Not applicable	Yes
	Storage stability of residues in frozen soil samples	Required	No data	Not applicable	Yes, to support studies
	Bioconcentration in fish	Conditionally Required	No data	Not applicable	No, data is available
	Spray droplet size spectrum (201-1)	Required. Data are available.	No data	Not applicable	No - Syngenta member of the S
	Spray drift field deposition (202-1)	May be satisfied through membership in the Spray Drift Task Force			

1 Butyl refers to the parent compound, fluazifop-p-butyl, and acid refers to the acid degradate, fluazifop-p-acid.

2 EFED Interim Policy for Stereoisomeric Pesticides (available at

[http://www.epa.gov/oppefed1/ecorisk\\_ders/stereoisomer\\_policy.htm](http://www.epa.gov/oppefed1/ecorisk_ders/stereoisomer_policy.htm)) states, "...an aerobic soil metabolism study (GLN 162-1/835.3300) is required as part of the minimal data set for enantiomeric enriched mixtures."

3 EFED Interim Policy for Stereoisomeric Pesticides (available at

[http://www.epa.gov/oppefed1/ecorisk\\_ders/stereoisomer\\_policy.htm](http://www.epa.gov/oppefed1/ecorisk_ders/stereoisomer_policy.htm)) states, "...Analytical chemistry methods capable of identifying and quantifying each separate enantiomer and chiral transformation products in soil, water, and fish tissue are needed."

- 4 A high-performance liquid chromatography (HPLC) method was submitted to detect fluazifop-acid in water in connection with a ground water monitoring study but it has not been independently evaluated and did not examine the enantiomers present (MRID 40439402).
- 5 List of Spray Drift Task Force Members available at <http://www.agdrift.com/Text%20pages/members.htm> (accessed March 28, 2008).

### **Summary of fate data requirements for fluazifop-butyl and fluazifop-acid.**

<b>Guideline Number</b>	<b>Study Description</b>	<b>40 CFR § 158 Requirements: Terrestrial Outdoor Use</b>	<b>MRID Number</b>	<b>Classification</b>	<b>Are more data needed for this risk</b>
<b>Degradation Studies – Laboratory</b>					
835.2120	Hydrolysis	Required	87529	Not classified	No, data is available
835.2240	Photodegradation in water	Required	93788	Not classified	Pending for registration of MRID 93788
835.2410	Photodegradation in soil	Required	93789	Not classified	No, data is available
835.2370	Photodegradation in air	Conditionally required			No, due to lack of data
<b>Metabolism Studies – Laboratory</b>					
835.4100	Aerobic soil	Required	87492  87493, 92067032, 92067033	Not classified  Supplemental due to insufficient time points to characterize parent and all foreign soils	No
835.4200	Anaerobic soil	Required	87493, 92067032, 92067033	Supplemental due to insufficient time points to characterize parent and all foreign soils	No
835.4300	Aerobic aquatic	Required	No data	No data	No, data is available
835.4400	Anaerobic aquatic	Required	87493, 92067032	Supplemental due to insufficient time points to characterize parent and all foreign soils	No
<b>Mobility Studies</b>					
835.1230 835.1240	Leaching and adsorption/desorption	Required	93794  41900604	Not classified but soil was autoclaved and study would be unacceptable  Acceptable for fluazifop-acid and degradate X	No, fluazifop-acid longer registration required
835.1410	Volatility – laboratory	Conditionally Required	No data	Not applicable	No, due to lack of data
835.8100	Volatility – Field	Conditionally required	No data	Not applicable	No, due to lack of data
<b>Dissipation Studies - Field</b>					
835.6100	Terrestrial	Required	41598003  41598004	Supplemental; does not completely fulfill guideline requirements because of rototilling of soil  Supplemental; does not completely fulfill guideline	No, fluazifop-acid longer registration required

			87495 & 92067034	requirements because major degradates were not monitored and the freezer storage stability study was not adequate	
			41900605	Supplemental; does not completely fulfill guideline requirements because of inadequate sampling intervals, application rate not confirmed, and analytical methods were not provided	
			41900606	Supplemental; does not completely fulfill guideline requirements because of rototilling of soil	
				Unacceptable due to data not corresponding to aerobic metabolism study on degradate amounts	
835.6200	Aquatic (sediment)	Conditionally required	No data	Not applicable	No, fluazifc longer regis
835.6300	Forestry	Not required	No data	Not applicable	No, fluazifc longer regis
835.6400	Combination and tank mixes	Conditionally required	No data	Not applicable	No, fluazifc longer regis
<b>Ground Water Monitoring</b>					
835.7100	Ground water monitoring	Conditionally required	40439401	Unacceptable due to nontargeted monitoring	No, fluazifc longer regis
<b>Other</b>					
	Validation of Analytical Method and Independent laboratory validation of parent and significant metabolites	Required for validation of field studies, e.g., water and soil	40439402	This method has not been validated	No, fluazifc longer regis
	Storage stability of residues in frozen soil samples	Required	41598004 40439401	Not classified - A storage stability study for fluazifop-butyl for 1.25 months was completed in connection with a terrestrial field dissipation study  Not classified - Storage stability study supporting ground water monitoring study	No, fluazifc longer regis
835.1730	Bioconcentration in fish	Conditionally Required	93796 & 92067035 93795	Supplemental due to 45% of degradate in viscera not characterized.  Not classified	No, the stuc bioconcentr radioactivit conservativ bioconcentr p-butyl and
	Spray droplet size spectrum (201-1) Spray drift field	Required. Data are available. May be satisfied through	No data	Not applicable	No, Syngen Protection, the Spray E

	deposition (202-1)	membership in the Spray Drift Task Force			
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1 List of Spray Drift Task Force Members available at <http://www.agdrift.com/Text%20pages/members.htm> (accessed March 28, 2008)

## Appendix B

### Ecological Effects Data Requirements for Fluazifop-p-butyl

Guideline No.	Data Requirement	Species
850.4150	Vegetative Vigor (Tier I)	Monocots: (4 species of at least two families, one species of which is corn ( <i>Zea mays</i> ) Dicots: Six species of at least four families, one species of which is soybean ( <i>Glycine max</i> )
850.4550 850.4500	Algal Plant Toxicity (Tier I)	<i>Selenastrum capricornutum</i> (freshwater green alga) <i>Anabaena flos-aquae</i> (freshwater cyanobacterium)
850.4400	Aquatic Plant Growth (Tier I)	<i>Lemna gibba</i> (duckweed)

### Ecological Effects Data Requirements for Degredate-X.

Guideline No.	Data Requirement	Species
850.1075	Freshwater Fish Acute LC <sub>50</sub>	Cold water species: <i>Oncorhynchus mykiss</i> (Rainbow Trout) Warm water species: <i>Lepomis macrochirus</i> (Bluegill Sunfish)
850.1010	Freshwater Invertebrate Acute LC <sub>50</sub> or EC <sub>50</sub>	<i>Daphnia magna</i> (water flea)
850.1075	Estuarine/Marine Fish LC <sub>50</sub>	<i>Cyprinodon variegatus</i> (Sheepshead Minnow)
850.1025 850.1055	Estuarine/Marine Invertebrate (Mollusk) shell deposition or embryo-larval EC <sub>50</sub>	<i>Crassostrea virginica</i> (Eastern Oyster) Shell deposition
850.1035 850.1045	Estuarine/Marine Invertebrate (Shrimp)	<i>Americamysis bahia</i> (mysid shrimp)
850.1400	Fish Early Life-Stage (Freshwater)	Prefer more sensitive of the acute fish species tested
	(Marine)	Prefer Atlantic silverside
850.1300	Aquatic Invertebrate Life-Cycle (Freshwater)	<i>Daphnia magna</i> (water flea)
850.1350	(Marine)	<i>Americamysis bahia</i> (mysid shrimp)
850.1500	Fish Full Life-Cycle (Freshwater) (Marine)	--
850.4150	Vegetative Vigor	Monocots: (4 species of at least two families, one species of which is corn ( <i>Zea mays</i> ) Dicots: Six species of at least four families, one species of which is soybean ( <i>Glycine max</i> )

<b>Guideline No.</b>	<b>Data Requirement</b>	<b>Species</b>
850.4400	Aquatic Plant Growth	<i>Lemna gibba</i> (duckweed)
850.4550 850.4500	Algal Plant Toxicity	<i>Selenastrum capricornutum</i> (freshwater green alga)
		<i>Anabaena flos-aquae</i> (freshwater cyanobacterium)
		<i>Skeletonema costatum</i> (marine diatom)
		<i>Pseudokirchneriella subcapitata</i> (green alga)
		<i>Navicula pelliculosa</i> (freshwater diatom)

## Appendix A

### Summary of fate data requirements for fluazifop-p-butyl and fluazifop-p-acid.

Guideline Number	Study Description	40 CFR § 158 Requirements: Terrestrial Outdoor Use	MRID Number (chemical) <sup>1</sup>	Classification	Are more data needed for this risk assessment?
<b>Degradation Studies – Laboratory</b>					
835.2120	Hydrolysis	Required	41598001 (butyl)  46190601 (acid)	Acceptable  Acceptable	Yes, the ratio of enantiomers in water for butyl and acid are needed. Hydrolysis data for the racemic mixture (MRID 87529) indicate hydrolysis rate of pure enantiomer is 2x the rate for the racemic mixture.
835.2240	Photodegradation in water	Required	42543202 (butyl)	Unacceptable	Pending, data is available for racemic mixture  Yes for acid
835.2410	Photodegradation on soil	Required	41598002 (butyl)	Acceptable	No for butyl Yes for acid
835.2370	Photodegradation in air	Conditionally required	No data	Not applicable	No due to low vapor pressure
<b>Metabolism Studies – Laboratory</b>					
835.4100	Aerobic soil	Required	162455 (butyl)  46190602 (acid)	Not classified in DER  Supplemental due to no material balance and transformation products not addressed	Yes for butyl  No for acid because data is available for the racemic mixture.
835.4200	Anaerobic soil	Required	No data	Not applicable	No, data is available for racemic mixture
835.4300	Aerobic aquatic	Required	46190605 (acid)	Acceptable	No
835.4400	Anaerobic aquatic	Required	No data	Not applicable	No, used data for anaerobic flooded soil in absence of data for aquatic environment.
<b>Mobility Studies</b>					
835.1230 835.1240	Leaching and adsorption/desorption	Required	46190603 (acid)	Supplemental due to insufficient mass balance and no soil with <1% organic matter. All soils	Yes for butyl and acid

**Summary of fate data requirements for fluazifop-p-butyl and fluazifop-p-acid.**

Guideline Number	Study Description	40 CFR § 158 Requirements: Terrestrial Outdoor Use	MRID Number (chemical) <sup>1</sup>	Classification	Are more data needed for this risk assessment?
			46190604 (butyl)	were foreign soils. Unacceptable due to heat sterilized soils	
835.1410	Volatility – laboratory	Conditionally Required	No data	Not applicable	No due to low vapor pressure
835.8100	Volatility – Field	Conditionally required	No data	Not applicable	No due to low vapor pressure
<b>Dissipation Studies - Field</b>					
835.6100	Terrestrial	Required	No data	Not applicable	Yes, a field dissipations study is needed that evaluates major degradates including degrate X, which made up as much as 37% of applied equivalents in the aerobic aquatic metabolism study (MRID 46190605)
835.6200	Aquatic (sediment)	Conditionally required	No data	Not applicable	No
835.6300	Forestry	Not required	No data	Not applicable	No, forestry uses were not requested
835.6400	Combination and tank mixes	Conditionally required	No data	Not applicable	No
<b>Ground Water Monitoring</b>					
835.7100	Ground water monitoring	Conditionally required	No data	Not applicable	No
<b>Other</b>					
	Analytical chemistry methods capable of identifying and quantifying each separate enantiomer in water		No data	Not applicable	Yes, methods to detect fluazifop-butyl, fluazifop-acid and other major degradates in water are needed to support water monitoring studies <sup>3,4</sup>
	Analytical chemistry methods capable of identifying and quantifying each separate enantiomer in soil		No data	Not applicable	Yes, methods to detect fluazifop-butyl, fluazifop-acid and other major degradates in soil are needed to support monitoring studies <sup>3</sup>

## Summary of fate data requirements for fluazifop-p-butyl and fluazifop-p-acid.

Guideline Number	Study Description	40 CFR § 158 Requirements: Terrestrial Outdoor Use	MRID Number (chemical) <sup>1</sup>	Classification	Are more data needed for this risk assessment?
	Analytical chemistry methods capable of identifying and quantifying each separate enantiomer in fish tissue		No data	Not applicable	Yes - methods to detect fluazifop-butyl, fluazifop-acid and other major degradates in tissue are required by the Stereoisomer Interim Guidance <sup>3</sup>
	Validation of Analytical Method and Independent laboratory validation of parent and significant metabolites for soil and water	Required for validation of field studies, e.g., water and soil	No data	Not applicable	Yes
	Storage stability of residues in frozen soil samples	Required	No data	Not applicable	Yes, to support terrestrial field dissipation studies
	Bioconcentration in fish	Conditionally Required	No data	Not applicable	No, data is available for racemic mixture
	Spray droplet size spectrum (201-1)	Required. Data are available. May be satisfied through membership in the Spray Drift Task Force	No data	Not applicable	No - Syngenta Crop Protection, Inc. is a member of the Spray Drift Task Force <sup>5</sup>
	Spray drift field deposition (202-1)				

1 Butyl refers to the parent compound, fluazifop-p-butyl, and acid refers to the acid degradate, fluazifop-p-acid.

2 EFED Interim Policy for Stereoisomeric Pesticides (available at [http://www.epa.gov/oppefed1/ecorisk\\_ders/stereoisomer\\_policy.htm](http://www.epa.gov/oppefed1/ecorisk_ders/stereoisomer_policy.htm)) states, "...an aerobic soil metabolism study (GLN 162-1/835.3300) is required as part of the minimal data set for enantiomeric enriched mixtures."

3 EFED Interim Policy for Stereoisomeric Pesticides (available at [http://www.epa.gov/oppefed1/ecorisk\\_ders/stereoisomer\\_policy.htm](http://www.epa.gov/oppefed1/ecorisk_ders/stereoisomer_policy.htm)) states, "...Analytical chemistry methods capable of identifying and quantifying each separate enantiomer and chiral transformation products in soil, water, and fish tissue are needed."

4 A high-performance liquid chromatography (HPLC) method was submitted to detect fluazifop-acid in water in connection with a ground water monitoring study but it has not been independently evaluated and did not examine the enantiomers present (MRID 40439402).

5 List of Spray Drift Task Force Members available at <http://www.agdrift.com/Text%20pages/members.htm> (accessed March 28, 2008).

**Summary of fate data requirements for fluazifop-butyl and fluazifop-acid.**

Guideline Number	Study Description	40 CFR § 158 Requirements: Terrestrial Outdoor Use	MRID Number	Classification	Are more data needed for this risk assessment?
<b>Degradation Studies – Laboratory</b>					
835.2120	Hydrolysis	Required	87529	Not classified	No, data is available for fluazifop-p-butyl.
835.2240	Photodegradation in water	Required	93788	Not classified	Pending formal classification of MRID 93788
835.2410	Photodegradation in soil	Required	93789	Not classified	No, data is available for fluazifop-p-butyl
835.2370	Photodegradation in air	Conditionally required			No, due to low vapor pressure
<b>Metabolism Studies – Laboratory</b>					
835.4100	Aerobic soil	Required	87492  87493, 92067032, 92067033	Not classified  Supplemental due to insufficient time points to characterize parent and all foreign soils	No
835.4200	Anaerobic soil	Required	87493, 92067032, 92067033	Supplemental due to insufficient time points to characterize parent and all foreign soils	No
835.4300	Aerobic aquatic	Required	No data	No data	No, data is available for fluazifop-p-acid.
835.4400	Anaerobic aquatic	Required	87493, 92067032	Supplemental due to insufficient time points to characterize parent and all foreign soils	No
<b>Mobility Studies</b>					
835.1230 835.1240	Leaching and adsorption/desorption	Required	93794  41900604	Not classified but soil was autoclaved and study would be unacceptable  Acceptable for fluazifop-acid and degradate X	No, fluazifop-butyl is no longer registered for use.
835.1410	Volatility – laboratory	Conditionally Required	No data	Not applicable	No, due to low vapor pressure

835.8100	Volatility – Field	Conditionally required	No data	Not applicable	No, due to low vapor pressure
<b>Dissipation Studies - Field</b>					
835.6100	Terrestrial	Required	41598003  41598004  87495 & 92067034  41900605  41900606	Supplemental; does not completely fulfill guideline requirements because of rototilling of soil  Supplemental; does not completely fulfill guideline requirements because major degradates were not monitored and the freezer storage stability study was not adequate  Supplemental; does not completely fulfill guideline requirements because of inadequate sampling intervals, application rate not confirmed, and analytical methods were not provided  Supplemental; does not completely fulfill guideline requirements because of rototilling of soil  Unacceptable due to data not corresponding to aerobic metabolism study on degradate amounts	No, fluazifop-butyl is no longer registered for use.
835.6200	Aquatic (sediment)	Conditionally required	No data	Not applicable	No, fluazifop-butyl is no longer registered for use.
835.6300	Forestry	Not required	No data	Not applicable	No, fluazifop-butyl is no longer registered for use.
835.6400	Combination and tank mixes	Conditionally required	No data	Not applicable	No, fluazifop-butyl is no longer registered for use.
<b>Ground Water Monitoring</b>					
835.7100	Ground water	Conditionally	40439401	Unacceptable due to nontargeted	No, fluazifop-butyl is no

	monitoring	required		monitoring	longer registered for use.
<b>Other</b>					
	Validation of Analytical Method and Independent laboratory validation of parent and significant metabolites	Required for validation of field studies, e.g., water and soil	40439402	This method has not been validated	No, fluazifop-butyl is no longer registered for use.
	Storage stability of residues in frozen soil samples	Required	41598004 40439401	Not classified - A storage stability study for fluazifop-butyl for 1.25 months was completed in connection with a terrestrial field dissipation study  Not classified - Storage stability study supporting ground water monitoring study	No, fluazifop-butyl is no longer registered for use
835.1730	Bioconcentration in fish	Conditionally Required	93796 & 92067035 93795	Supplemental due to 45% of degradate in viscera not characterized.  Not classified	No, the study showed minimal bioconcentration of total radioactivity which provides a conservative estimate of bioconcentration of fluazifop-p-butyl and fluazifop-p-acid.
	Spray droplet size spectrum (201-1)  Spray drift field deposition (202-1)	Required. Data are available. May be satisfied through membership in the Spray Drift Task Force	No data	Not applicable	No, Syngenta Crop Protection, Inc. is a member of the Spray Drift Task Force <sup>5</sup>

I List of Spray Drift Task Force Members available at <http://www.agdrift.com/Text%20pages/members.htm> (accessed March 28, 2008)

## Appendix B

### Ecological Effects Data Requirements for Fluazifop-p-butyl

Guideline No.	Data Requirement	Species
850.4150	Vegetative Vigor (Tier I)	Monocots: (4 species of at least two families, one species of which is corn ( <i>Zea mays</i> ) Dicots: Six species of at least four families, one species of which is soybean ( <i>Glycine max</i> )
850.4550 850.4500	Algal Plant Toxicity (Tier I)	<i>Selenastrum capricornutum</i> (freshwater green alga)
		<i>Anabaena flos-aquae</i> (freshwater cyanobacterium)
850.4400	Aquatic Plant Growth (Tier I)	<i>Lemna gibba</i> (duckweed)

### Ecological Effects Data Requirements for Degredate-X.

Guideline No.	Data Requirement	Species
850.1075	Freshwater Fish Acute LC <sub>50</sub>	Cold water species: <i>Oncorhynchus mykiss</i> (Rainbow Trout)
		Warm water species: <i>Lepomis macrochirus</i> (Bluegill Sunfish)
850.1010	Freshwater Invertebrate Acute LC <sub>50</sub> or EC <sub>50</sub>	<i>Daphnia magna</i> (water flea)
850.1075	Estuarine/Marine Fish LC <sub>50</sub>	<i>Cyprinodon variegatus</i> (Sheepshead Minnow)
850.1025 850.1055	Estuarine/Marine Invertebrate (Mollusk) shell deposition or embryo-larval EC <sub>50</sub>	<i>Crassostrea virginica</i> (Eastern Oyster) Shell deposition
850.1035 850.1045	Estuarine/Marine Invertebrate (Shrimp)	<i>Americamysis bahia</i> (mysid shrimp)
850.1400	Fish Early Life-Stage (Freshwater)	Prefer more sensitive of the acute fish species tested
	(Marine)	Prefer Atlantic silverside
850.1300	Aquatic Invertebrate Life-Cycle (Freshwater)	<i>Daphnia magna</i> (water flea)
850.1350	(Marine)	<i>Americamysis bahia</i> (mysid shrimp)
850.1500	Fish Full Life-Cycle (Freshwater) (Marine)	--
850.4150	Vegetative Vigor	Monocots: (4 species of at least two families, one species of which is corn ( <i>Zea mays</i> ) Dicots: Six species of at least four families, one species of which is soybean ( <i>Glycine max</i> )

<b>Guideline No.</b>	<b>Data Requirement</b>	<b>Species</b>
850.4400	Aquatic Plant Growth	<i>Lemna gibba</i> (duckweed)
850.4550 850.4500	Algal Plant Toxicity	<i>Selenastrum capricornutum</i> (freshwater green alga)
		<i>Anabaena flos-aquae</i> (freshwater cyanobacterium)
		<i>Skeletonema costatum</i> (marine diatom)
		<i>Pseudokirchneriella subcapitata</i> (green alga)
		<i>Navicula pelliculosa</i> (freshwater diatom)

## Appendix C

### *Species in Counties by State and Taxa*

No species were excluded

Minimum of 1 Acre

All Medium Types Reported

Mammal, Crustacean, Bivalve, Gastropod, Dicot, Monocot, Ferns, Conf/cycds, Coral, Lichen

*bananas, grapes, plantains (PR), sugarbeets for sugar, citrus fruit, all, citrus fruit, other AL, AK, AZ, AR, CA, CO, CT, DE, DC, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY*

<b>Alabama</b>	<b>Bivalve</b>	<b>Bivalve</b>
<b>Bivalve</b>		
Pocketbook	Jackson	Winston
Combshell, Southern (=Penitent mussel)	Lauderdale	Mussel, Fine-lined
<i>Epioblasma penita</i>	Lawrence	<i>Lampsilis altilis</i>
Lamar	Limestone	Blount
	Madison	Calhoun
	Marshall	
	Cherokee	
Combshell, Upland	Morgan	Clay
<i>Epioblasma metastriata</i>	Mussel, Acornshell Southern	
Cherokee	<i>Epioblasma othcaloogensis</i>	Cullman
Cleburne	Cherokee	De Kalb
Jefferson	Shelby	Elmore
St. Clair	St. Clair	
Kidneyshell, Triangular	Mussel, Alabama Moccasinshell	Etowah
<i>Ptychobranchus greenii</i>	<i>Medionidus acutissimus</i>	Fayette
Blount	Cherokee	
Cherokee	Etowah	Macon
Jefferson	Lamar	Shelby
Cullman	Lawrence	St. Clair
Lawrence	Pickens	
Etowah	Shelby	
Jefferson	Winston	
Lawrence		
St. Clair		
Talladega		
Walker		
Tallapoosa		
Winston		
Tuscaloosa		
Mucket, Orangenacre	Mussel, Coosa Moccasinshell	Walker
<i>Lampsilis perovalis</i>	<i>Medionidus parvulus</i>	Winston
Fayette	Cherokee	Mussel, Fine-rayed
Pigtoe	Talladega	<i>Fusconaia</i>
Jefferson	Winston	
<i>cuneolus</i>		
Lamar		Jackson

Lawrence	Mussel, Cumberland Combshell	Madison
Pickens	<i>Epioblasma brevidens</i>	Marshall
Shelby	Colbert	Mussel, Heavy
Pigtoe (=Judge Tait's)		Mussel)
Winston	Mussel, Dark Pigtoe	<i>Pleurobema</i>
<i>taitianum</i>	<i>Pleurobema furvum</i>	<i>Pleurobema</i>
<i>taitianum</i>		.
Mucket, Pink (Pearlymussel)		Baldwin
<i>Lampsilis abrupta</i>	Fayette	Baldwin
Colbert	Lawrence	Monroe
	Tuscaloosa	Pickens
<b>Bivalve</b>	<b>Bivalve</b>	<b>Crustacean</b>
Mussel, Heelsplitter Inflated		Shrimp, Alabama
Cave	Etowah	
<i>Potamilus inflatus</i>	Fayette	<i>Palaemonias</i>
<i>alabamae</i>		
Baldwin	Lamar	Madison
Choctaw	Macon	<b>Dicot</b>
Hale	Marion	Amphianthus, Little
Sumter	Perry	<i>Amphianthus</i>
<i>pusillus</i>		
Tuscaloosa	Pickens	
Chambers		
Washington	Tuscaloosa	
Randolph		
Mussel, Ovate Clubshell	Mussel, Southern Pigtoe	Barbara Buttons,
Mohr's		
<i>Pleurobema perovatum</i>	<i>Pleurobema georgianum</i>	<i>Marshallia mohrii</i>
Blount	Calhoun	Calhoun
Cullman	Cherokee	
Cherokee		
Fayette	Cleburne	Etowah
Lamar	Etowah	
Macon	St. Clair	Bladderpod, Lyrate
Pickens	Pearlymussel, Alabama Lamp	<i>Lesquerella lyrata</i>
St. Clair	<i>Lampsilis virescens</i>	Colbert
Lawrence		
Sumter	Jackson	
Prairie		Clover, Leafy
Tuscaloosa	Pearlymussel, Cracking	<i>Dalea foliosa</i>
Walker	<i>Hemistena lata</i>	
Jefferson		
Mussel, Ring Pink (=Golf Stick	Lauderdale	
Lawrence		
<i>Obovaria retusa</i>	Pearlymussel, Cumberland	Morgan
Colbert	<i>Quadrula intermedia</i>	
Lauderdale	Limestone	Harperella
<i>nodosum</i>		<i>Ptilimnium</i>
Mussel, Rough Pigtoe	Pearlymussel, Orange-footed	
Cherokee		
<i>Pleurobema plenum</i>	<i>Plethobasus cooperianus</i>	Cullman

Colbert	Madison	De Kalb
Lauderdale	Marshall	Jackson
Lawrence	Morgan	Walker
Limestone	Pearlymussel, Pale Lilliput	Leather-flower,
Alabama		
Madison	<i>Toxolasma cylindrellus</i>	<i>Clematis socialis</i>
Marshall	Jackson	
Cherokee		
Morgan	Pearlymussel, Turgid-blossom	Etowah
Mussel, Shiny Pigtoe	<i>Epioblasma turgidula</i>	St. Clair
<i>Fusconaia cor</i>	Lauderdale	Leather-flower,
Morefield's		
Jackson	Pearlymussel, White Wartyback	<i>Clematis morefieldii</i>
Madison	<i>Plethobasus cicatricosus</i>	Madison
Marshall	Colbert	Pitcher-plant,
Alabama Canebrake		
Mussel, Shiny-rayed Pocketbook	Lauderdale	<i>Sarracenia rubra</i>
<i>alabamensis</i>		
<i>Lampsilis subangulata</i>	Stirrupshell	Autauga
Russell	<i>Quadrula stapes</i>	Chilton
Mussel, Southern Clubshell	Pickens	Elmore
<i>Pleurobema decisum</i>	Sumter	Pitcher-plant,
Green		
Cherokee	<b>Crustacean</b>	<i>Sarracenia</i>
<i>oreophila</i>		

<u>Dicot</u>	<u>Gastropod</u>	<u>Mammal</u>
Cherokee	Rocksail, Plicate	Morgan
De Kalb	<i>Leptoxis plicata</i>	Shelby
Etowah	Blount	Mouse, Alabama
Beach		
Jackson	Jefferson	<i>Peromyscus</i>
<i>polionotus ammobates</i>		Baldwin
Marshall	Rocksail, Round	Mouse, Perdido
Potato-bean, Price's	<i>Leptoxis ampla</i>	
Key Beach		
<i>Apios priceana</i>	Shelby	<i>Peromyscus</i>
<i>polionotus trissyllepsis</i>		Baldwin
Autauga	Snail, Armored	
Madison	<i>Pyrgulopsis (=Marstonia) pachyta</i>	<u>Monocot</u>
Marshall	Limestone	Grass, Tennessee
Yellow-eyed		
<u>Ferns</u>	Snail, Lioplax Cylindrical	<i>Xyris</i>
<i>tennesseensis</i>		
Fern, Alabama Streak-sorus	<i>Lioplax cyclostomaformis</i>	Calhoun
<i>Thelypteris pilosa</i> var. <i>alabamensis</i>	Shelby	Trillium, Relict
Winston	Snail, Tulotoma	<i>Trillium reliquum</i>
Fern, American hart's-tongue	<i>Tulotoma magnifica</i>	Bullock
<i>Asplenium scolopendrium</i> var.	Calhoun	Henry
<i>americanum</i>	Coosa	Water-plantain,
Kral's		
Jackson	Elmore	<i>Sagittaria</i>
<i>secundifolia</i>		
Morgan	Shelby	De Kalb
Quillwort, Louisiana	St. Clair	Winston
<i>Isoetes louisianensis</i>	Talladega	

	<u>Mammal</u>	<u>Arizona</u>
		<u>Dicot</u>
Mobile		
Washington		
<b>Gastropod</b>		
Kearney's	Bat, Gray	
Campeloma, Slender	<i>Myotis grisescens</i>	Blue-star,
<i>kearneyana</i>		
<i>Campeloma decampi</i>	Calhoun	<i>Amsonia</i>
Limestone		
Hedgehog	Colbert	Pima
Elimia, Lacy	De Kalb	Cactus, Arizona
<i>triglochidiatus</i> var.	Jackson	
		<i>Echinocereus</i>
<i>Elimia crenatella</i>	Lauderdale	
Talladega	Lawrence	<i>arizonicus</i>
Maricopa		
		Pinal
Pebblesnail, Flat	Limestone	
<i>Lepyrium showalteri</i>	Madison	Cactus, Brady
Pincushion		
	Marshall	<i>Pediocactus bradyi</i>
Shelby		
		Coconin
o		
Riversnail, Anthony's	Morgan	
<i>Atheamia anthonyi</i>	Shelby	Cactus, Cochise
Pincushion		
		<i>Coryphantha</i>
<i>robbinsorum</i>		
Jackson	Bat, Indiana	
Limestone	<i>Myotis sodalis</i>	Cochise
Rocksnail, Painted	Autauga	Cactus, Nichol's
Turk's Head		
<i>Leptoxis taeniata</i>	Colbert	<i>Echinocactus</i>
<i>horizonthalonius</i> var.		
		<i>nicholii</i>
	De Kalb	Pima
Calhoun	Jackson	
Chilton	Lawrence	Pinal
Shelby		
		Cactus, Pima
Pineapple	Limestone	
Talladega		<i>Coryphantha</i>
<i>scheeri</i> var.	Marshall	

<u>Dicot</u>	<u>Mammal</u>	<u>Monocot</u>
Pima	Bat, Lesser (=Sanborn's) Long-nosed	Ladies'-tresses,
Canelo Hills	<i>Leptonycteris curasoae yerbabuena</i>	<i>Spiranthes</i>
Santa Cruz		
<i>delitescens</i>		
Cactus, Siler Pincushion	Cochise	Cochise
<i>Pediocactus</i>	Graham	Santa
Cruz		
(= <i>Echinocactus</i> ,= <i>Utahia</i> ) <i>sileri</i>		
Coconino	Maricopa	Sedge, Navajo
Mohave	Pima	<i>Carex specuicola</i>
Cliffrose, Arizona	Pinal	Apache
Coconino	Santa Cruz	
<i>Purshia</i> (= <i>cowanii</i> ) <i>subintegra</i>	Yavapai	<b>Arkansas</b>
Graham	Yuma	<b>Arkansas</b>
Maricopa		<b>Bivalve</b>
Mohave	Ferret, Black-footed	Fatmucket,
Arkansas	<i>Mustela nigripes</i>	<i>Lampsilis powelli</i>
Yavapai	Apache	
<i>Cycladenia</i> , Jones	Coconino	
Montgomery		
<i>Cycladenia jonesii</i> (= <i>humilis</i> )		Polk
Mohave	Jaguar	Polk
Fleabane, Zuni (Pearlymussel)	<i>Panthera onca</i>	Saline
<i>Erigeron rhizomatus</i>	Cochise	Mucket, Pink
Apache		
Arkansas	Graham	<i>Lampsilis abrupta</i>
Groundsel, San Francisco Peaks	Pima	
<i>Senecio franciscanus</i>	Pinal	Clay
Coconino	Santa Cruz	Fulton
Independence	Jaguarundi, Sinaloan	
Milk-vetch, Holmgren		
<i>Astragalus holmgreniorum</i>	<i>Herpailurus</i> (= <i>Felis</i> ) <i>yagouaroundi</i>	Jackson
Lawrence	<i>tolteca</i>	
Mohave	Cochise	Monroe
Milk-vetch, Sentry	Graham	
Randolph		
<i>Astragalus cremnophylax</i> var. <i>cremnophylax</i>	Ocelot	Sevier
Coconino	<i>Leopardus</i> (= <i>Felis</i> ) <i>pardalis</i>	White
Milkweed, Welsh's	Cochise	Mussel, Scaleshell
<i>Asclepias welshii</i>	Graham	<i>Leptodea leptodon</i>
Coconino	Pima	Fulton
Umbel, Huachuca Water	Santa Cruz	Howard
Lawrence	Pronghorn, Sonoran	
<i>Lilaeopsis schaffneriana</i> var.		
Randolph	<i>Antilocapra americana sonoriensis</i>	
Cochise	Maricopa	Saline
Pima	Pima	Sevier
Santa Cruz	Yuma	Mussel, Speckled
Pocketbook		

<b>Gastropod</b>		
Ambersnail, Kanab	Squirrel, Mount Graham Red	<i>Lampsilis streckeri</i>
Buren	<i>Tamiasciurus hudsonicus</i>	Van
<i>Oxylooma haydeni kanabensis</i>	Graham	Pearlymussel, Fat
Pocketbook	Vole, Hualapai Mexican	<i>Potamilus capax</i>
Coconino	<i>Microtus mexicanus hualpaiensis</i>	
Mohave		
Arkansas		
<b>Mammal</b>	Coconino	
Craighead	Mohave	Monroe
<b>Bivalve</b>	<b>Mammal</b>	<b>Crustacean</b>
Poinsett	Pope	
Riverside		
White	Van Buren	San
Diego	Washington	Ventura
Rock-pocketbook, Ouachita (=Wheeler's pm)	Bat, Indiana	Fairy Shrimp, San
Diego	<i>Myotis sodalis</i>	<i>Branchinecta</i>
<i>Arkansasia wheeleri</i>		
<i>sandiegonensis</i>	Izard	San
Little River		
Diego	Newton	Fairy Shrimp,
Sevier		
Vernal Pool		
<b>Crustacean</b>	Bat, Ozark Big-eared	<i>Branchinecta lynchi</i>
Crayfish, Cave (Cambarus	<i>Corynorhinus</i> (= <i>Plecotus</i> )	Alameda
<i>Cambarus aculabrum</i>	<i>townsendii ingens</i>	
Benton	Washington	Amador
<b>Dicot</b>		Butte
Bladderpod, Missouri	<b>California</b>	Colusa
Costa	<b>Conf/cycds</b>	Contra
<i>Lesquerella filiformis</i>		
Izard	Cypress, Gowen	Fresno
Washington	<i>Cupressus goveniana</i> ssp.	Glenn
Fruit, Earth (=geocarpon)	Monterey	Glenn
		Kings
<i>Geocarpon minimum</i>	Cypress, Santa Cruz	Madera
Mariposa	Mariposa	
Franklin	<i>Cupressus abramsiana</i>	Merced
Harperella	San Mateo	
Monterey	Santa Cruz	
<i>Ptilimnium nodosum</i>		
Garland	<b>Crustacean</b>	Napa
Montgomery		Placer
Riverside	Crayfish, Shasta	Placer
Yell	<i>Pacifastacus fortis</i>	
	Sacramento	

Sacramento	Shasta	San
Benito		
Pondberry		San
Benito		
<i>Lindera melissifolia</i>	Fairy Shrimp, Conservancy Fairy	San
Joaquin	<i>Branchinecta conservatio</i>	San Luis
Obispo		
Clay		San Luis
Obispo		
Jackson	Butte	Santa
Barbara		
Lawrence	Glenn	Shasta
<u>Gastropod</u>	Merced	Solano
	Solano	
	Stanislaus	
Shagreen, Magazine Mountain	Tehama	Tehama
<i>Mesodon magazinensis</i>	Ventura	Tehama
		Tulare
Logan		
<u>Mammal</u>	Fairy Shrimp, Longhorn	Ventura
Bat, Gray	<i>Branchinecta longiantenna</i>	Yuba
Freshwater	Alameda	Shrimp, California
<i>Myotis grisescens</i>		
Benton	Contra Costa	<i>Syncaris pacifica</i>
Boone	Kern	Marin
Carroll	Monterey	Napa
Independence	San Luis Obispo	Sonoma
Vernal Pool	Fairy Shrimp, Riverside	Tadpole Shrimp,
Izard		
Lawrence	<i>Streptocephalus woottoni</i>	<i>Lepidurus packardi</i>
Newton	Los Angeles	Alameda
	Orange	Amador

<u>Crustacean</u>	<u>Dicot</u>	<u>Dicot</u>
Butte (incl. Irish Hill)	Riverside	Buckwheat, lone
Calaveras ( <i>incl. var.</i> )	Bedstraw, El Dorado	<i>Eriogonum apricum</i>
Colusa	<i>Galium californicum ssp. sierrae</i>	<i>prostratum</i> )
El Dorado	El Dorado	Amador
Fresno	Bedstraw, Island	Buckwheat,
Southern Mountain Wild Glenn <i>kennedyi</i> var.	<i>Galium buxifolium</i>	<i>Eriogonum</i>
Kings	Santa Barbara	<i>austromontanum</i>
Bernardino		San
Madera	Bird's-beak, Palmate-bracted	
Mariposa	<i>Cordylanthus palmatus</i>	Bush-mallow, San
Clemente Island		<i>Malacothamnus</i>
<i>clementinus</i>		
Merced	Alameda	Los
Angeles		
Placer	Colusa	
Sacramento	Fresno	Bush-mallow,
Santa Cruz Island		<i>Malacothamnus</i>
<i>fasciculatus</i> var.		
San Joaquin	Madera	<i>nesioticus</i>
Shasta	San Joaquin	Santa
Barbara		
Solano	Yolo	Butterweed,
Layne's		
Stanislaus	Bird's-beak, Pennell's	<i>Senecio layneae</i>
Sutter	<i>Cordylanthus tenuis ssp. capillaris</i>	El
Dorado		
Tehama	Sonoma	
Tuolumne		
Tulare	Bird's-beak, salt marsh	Button-celery, San
Diego		
Yolo	<i>Cordylanthus maritimus ssp.</i>	<i>Eryngium</i>
<i>aristulatum</i> var. <i>parishii</i>		
Yuba	Los Angeles	
Riverside		
<u>Dicot</u>	Orange	San
Diego		
Adobe Sunburst, San Joaquin	San Diego	Cactus, Bakersfield
<i>Pseudobahia peirsonii</i>	San Luis Obispo	<i>Opuntia releasei</i>
Fresno	Santa Barbara	Kern
Madera	Ventura	Ceanothus, Coyote
Stanislaus	Bird's-beak, Soft	<i>Ceanothus ferrisae</i>
Allocarya, Calistoga	<i>Cordylanthus mollis ssp. mollis</i>	Santa
Clara		
<i>Plagiobothrys strictus</i>	Contra Costa	Ceanothus, Pine
Hill		
Napa	Napa	<i>Ceanothus</i>
<i>roderickii</i>		
Ambrosia, San Diego	Solano	El

Dorado		
<i>Ambrosia pumila</i>	Bladderpod, San Bernardino	Ceanothus, Vail
Lake		
Riverside		
<i>ophiochilus</i>	<i>Lesquerella kingii ssp. bernardina</i>	<i>Ceanothus</i>
San Diego	San Bernardino	
Riverside		
Baccharis, Encinitas	Bluecurls, Hidden Lake	Checker-mallow,
Keck's		
<i>Baccharis vanessae</i>	<i>Trichostema austromontanum ssp. compactum</i>	<i>Sidalcea keckii</i>
Orange		Fresno
San Diego	San Bernardino	
Barberry, Island	Broom, San Clemente Island	Tulare
Kenwood Marsh		
Kenwood Marsh		Checker-mallow,
<i>Berberis pinnata ssp. insularis</i>	<i>Lotus dendroideus ssp. traskiae</i>	Checker-mallow,
<i>ssp. valida</i>		<i>Sidalcea oregana</i>
Santa Barbara	Los Angeles	Sonoma
Barberry, Nevin's	Buckwheat, Cushmanbury	
Pedate		Checker-mallow,
<i>Berberis nevinii</i>	<i>Eriogonum ovalifolium var. vineum</i>	Checker-mallow,
Los Angeles	San Bernardino	<i>Sidalcea pedata</i>
Bernardino		San

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<u>Dicot</u>	<u>Dicot</u>	<u>Dicot</u>
Clarkia, Pismo Hill <i>Clarkia speciosa</i> ssp. <i>immaculata</i> <i>californicum</i> ssp.	Ventura Dudleya, Marcescent	Flannelbush, Pine <i>Fremontodendron</i> <i>decumbens</i>
San Luis Obispo Clarkia, Presidio Dorado	<i>Dudleya cymosa</i> ssp. <i>marcescens</i> Los Angeles	EI
<i>Clarkia franciscana</i> Cruz Island Alameda <i>conchulifera</i>	Orange Santa Barbara	Fringepod, Santa <i>Thysanocarpus</i> Santa
Barbara Clarkia, Springville <i>Clarkia springvillensis</i> Slender-flowered Tulare <i>hoffmannii</i> Clarkia, Vine Hill Barbara	Dudleya, Santa Clara Valley <i>Dudleya setchellii</i> Alameda Contra Costa	Gilia, Hoffmann's <i>Gilia tenuiflora</i> ssp. Santa
<i>Clarkia imbricata</i> Sonoma <i>arenaria</i> Clover, Fleshy Owl's Monterey	Fresno Monterey San Benito	Gilia, Monterey <i>Gilia tenuiflora</i> ssp.
<i>Castilleja campestris</i> ssp. Hartweg's Fresno <i>bahii</i> Madera Mariposa Merced Stanislaus San Joaquin Stanislaus Tuolumne	Santa Clara Dudleya, Santa Cruz Island <i>Dudleya nesiotica</i> Santa Barbara Dudleya, Santa Monica Mountains <i>Dudleya cymosa</i> ssp. <i>ovatifolia</i> Los Angeles Orange Ventura	Golden Sunburst, <i>Pseudobahia</i> Fresno Madera Goldfields, Burke's <i>Lasthenia burkei</i> Lake
Clover, Monterey Mendocino <i>Trifolium trichocalyx</i> Monterey Costa Clover, Showy Indian <i>conjugens</i> <i>Trifolium amoenum</i> Marin Costa Sonoma Mendocino	Dudleya, Verity's <i>Dudleya verityi</i> Ventura Dwarf-flax, Marin <i>Hesperolinon congestum</i> Marin	Sonoma Goldfields, Contra <i>Lasthenia</i> Alameda Contra Montere
y Coyote-thistle, Loch Lomond <i>Eryngium constancei</i>	Evening-primrose, Antioch Dunes <i>Oenothera deltoides</i> ssp. <i>howellii</i>	Napa

Lake	Contra Costa	Santa
Barbara	Sacramento	Santa
Crownbeard, Big-leaved		
Clara		
<i>Verbesina dissita</i>	Evening-primrose, San Benito	Solano
Orange	<i>Camissonia benitensis</i>	Grass, Hairy Orcutt
San Diego	San Benito	<i>Orcuttia pilosa</i>
		Butte
Crownscale, San Jacinto Valley	Fiddleneck, Large-flowered	Colusa
<i>Atriplex coronata var. notatior</i>	<i>Amsinckia grandiflora</i>	Fresno
Riverside	Alameda	Glenn
Daisy, Parish's	Contra Costa	Madera
<i>Erigeron parishii</i>	San Joaquin	
Riverside	Flannelbush, Mexican	Merced
Mariposa		
San Bernardino	<i>Fremontodendron mexicanum</i>	
Dudleya, Conejo	San Diego	
Stanislaus		Tehama
<i>Dudleya abramsii</i> ssp. <i>parva</i>		

### Dicot

Grass, Sacramento Orcutt  
Barbara

*Orcuttia viscidia*

Butte County

Amador

*floccosa* ssp. *californica*

Sacramento

Grass, Slender Orcutt

*Orcuttia tenuis*

Sebastopol

Butte

*vinculans*

Lake

Lassen

Braunton's

Sacramento

*brauntonii*

Shasta

Angeles

Siskiyou

Tehama

Jewelflower, California

Hunt's

*Caulanthus californicus*  
*clarianus*

Fresno

Kern

Kings

Coachella Valley

San Luis Obispo

*lentiginosus* var.

Santa Barbara

Riverside

### Dicot

San Mateo

Liveforever, Laguna Beach

*Dudleya stolonifera*

Orange

Liveforever, Santa Barbara Island

*Dudleya traskiae*

Santa Barbara

Lupine, Clover  
*Lupinus tidestromii*

Madera

Marin

Monterey  
Sonoma

Lupine, Nipomo Mesa

*Lupinus nipomensis*

San Luis Obispo

Malacothrix, Island  
*Malacothrix squalida*

Santa Barbara

Malacothrix, Santa Cruz Island

### Dicot

Santa

Meadowfoam,

*Limnanthes*

Butte

Tehama

Meadowfoam,

*Limnanthes*

Sonoma

Milk-vetch,

*Astragalus*

Los

Orange  
Ventura

Milk-vetch, Clara

*Astragalus*

Napa

Sonoma

Milk-vetch,

*Astragalus*

Tulare	<i>Malacothrix indecora</i>	Milk-vetch, Coastal
Dunes		
Jewelflower, Tiburon var. <i>titi</i>	Santa Barbara	<i>Astragalus tener</i>
<i>Streptanthus niger</i>	Ventura	
Monterey		
Marin	Mallow, Kern	Milk-vetch,
Cushenbury		
Larkspur, Baker's	<i>Eremalche kernensis</i>	<i>Astragalus albens</i>
<i>Delphinium bakeri</i>	Kern	San
Bernardino		
Marin	Manzanita, Del Mar	Milk-vetch, Fish
Slough		
Sonoma	<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	<i>Astragalus</i>
<i>lentiginosus</i> var.		
Larkspur, San Clemente Island		Mono
<i>Delphinium variegatum</i> ssp.	Orange	Milk-vetch, Lane
Mountain		
Los Angeles	San Diego	<i>Astragalus</i>
<i>jaegerianus</i>		
Larkspur, Yellow	Manzanita, Ione	San
Bernardino		
<i>Delphinium luteum</i>	<i>Arctostaphylos myrtifolia</i>	Milk-vetch,
Pierson's		
Marin	Amador	<i>Astragalus</i>
<i>magdalenae</i> var.		
Sonoma	Calaveras	Imperial
Layia, Beach	Manzanita, Morro	Milk-vetch, Triple-
ribbed		
<i>Layia carnosa</i>	<i>Arctostaphylos morroensis</i>	<i>Astragalus</i>
<i>tricarinatus</i>		
Humboldt	San Luis Obispo	
Riverside		
Marin	Manzanita, Pallid	San
Bernardino		
Monterey	<i>Arctostaphylos pallida</i>	Milk-vetch, Ventura
Marsh		
Santa Barbara	Alameda	<i>Astragalus</i>
<i>pycnostachyus</i> var.		
Lessingia, San Francisco	Contra Costa	<i>lanosissimus</i>
<i>Lessingia germanorum</i> (=L.g. var.	Manzanita, Santa Rosa Island	Santa
Barbara		
<i>germanorum</i> )	<i>Arctostaphylos confertiflora</i>	Ventura

<u>Dicot</u>	<u>Dicot</u>	<u>Dicot</u>
Mint, Otay Mesa	Riverside	Pussypaws,
Mariposa	San Diego	<i>Calyptridium</i>
<i>Pogogyne nudiuscula</i>	Oxytheca, Cushenbury	Fresno
<i>pulchellum</i>	<i>Oxytheca parishii</i> var. <i>goodmaniana</i>	Madera
Riverside	San Bernardino	
San Diego		
Mint, San Diego Mesa		
Mariposa		
<i>Pogogyne abramsii</i>	Paintbrush, Ash-grey Indian	Rock-cress,
Hoffmann's		
San Diego	<i>Castilleja cinerea</i>	<i>Arabis hoffmannii</i>
Monardella, Willowy	San Bernardino	Santa
Barbara		
<i>Monardella linoides</i> ssp. <i>viminea</i>	Paintbrush, San Clemente Island	Rock-cress,
McDonald's		
San Diego	<i>Castilleja grisea</i>	<i>Arabis</i>
<i>mcdonaldiana</i>		
Morning-glory, Stebbins	Los Angeles	
Mendocino		
<i>Calystegia stebbinsii</i>	Paintbrush, Soft-leaved	Rock-cress, Santa
Cruz Island		
El Dorado	<i>Castilleja mollis</i>	<i>Sibara filifolia</i>
Mountainbalm, Indian Knob	Santa Barbara	Los
Angeles		
<i>Eriodictyon altissimum</i>	Paintbrush, Tiburon	Rush-rose, Island
San Luis Obispo	<i>Castilleja affinis</i> ssp. <i>neglecta</i>	<i>Helianthemum</i>
<i>greenei</i>		
Mountain-mahogany, Catalina Island	Marin	Los
Angels		
<i>Cercocarpus traskiae</i>	Napa	Sandwort, Bear
Valley		
Los Angeles	Santa Clara	<i>Arenaria ursina</i>
Mustard, Slender-petaled	Penny-cress, Kneeland Prairie	San
Bernardino		
<i>Thelypodium stenopetalum</i>	<i>Thlaspi californicum</i>	Sandwort, Marsh
San Bernardino	Humboldt	<i>Arenaria paludicola</i>
Navarretia, Few-flowered	Pentachaeta, Lyon's	San Luis
Obispo		
<i>Navarretia leucocephala</i> ssp.	<i>Pentachaeta lyonii</i>	Sea-blite, California
<i>pauciflora</i> (= <i>N. pauciflora</i> )		
Alameda	Los Angeles	<i>Suaeda californica</i>
Obispo	Ventura	San Luis
Contra Costa		
Lomond	Pentachaeta, White-rayed	Spineflower, Ben
Mendocino		
<i>pungens</i> var.	<i>Pentachaeta bellidiflora</i>	<i>Chorizanthe</i>
Napa		
Cruz	Marin	Santa
Santa Barbara	San Mateo	Spineflower,
Howell's		
<i>howellii</i>	Santa Cruz	<i>Chorizanthe</i>
Santa Clara		
Solano		

Mendocino		
Navarretia, Many-flowered	Phacelia, Island	
Monterey	Mendocino	
<i>Navarretia leucocephala</i> ssp.	<i>Phacelia insularis</i> ssp. <i>insularis</i>	Spineflower,
<i>pungens</i> var. <i>pungens</i>		
Alameda	Santa Barbara	<i>Chorizanthe</i>
Monterey		
Contra Costa	Phlox, Yreka	
Cruz	Monterey	
	<i>Phlox hirsuta</i>	Santa
Mendocino		
Orcutt's	Siskiyou	Spineflower,
Napa		<i>Chorizanthe</i>
<i>orcuttiana</i>		
	Polygonum, Scott's Valley	<i>Chorizanthe</i>
<i>orcuttiana</i>		
Santa Barbara	<i>Polygonum hickmanii</i>	Orange
Santa Clara	Santa Cruz	San
Diego		
Solano	Potentilla, Hickman's	Spineflower,
Robust		
Navarretia, Spreading	<i>Potentilla hickmanii</i>	<i>Chorizanthe</i>
<i>robusta</i> var. <i>robusta</i>		
<i>Navarretia fossalis</i>	Monterey	
	Monterey	
Los Angeles	San Mateo	Santa
Cruz		

<u>Dicot</u>	<u>Dicot</u>	<u>Dicot</u>
Spineflower, Scotts Valley Lomond <i>Chorizanthe robusta</i> var. <i>hartwegii</i> <i>teretifolium</i>	Tarplant, Otay <i>Deinandra</i> (= <i>Hemizonia</i> ) <i>conjugens</i>	Wallflower, Ben <i>Erysimum</i>
Santa Cruz Cruz	San Diego	Santa
Spineflower, Slender-horned Costa <i>Dodecahema leptoceras</i> <i>capitatum</i> var. <i>angustatum</i>	Tarplant, Santa Cruz <i>Holocarpha macradenia</i>	Wallflower, Contra <i>Erysimum</i>
Los Angeles Costa	Contra Costa	Contra
Riverside Menzie's	Monterey	Wallflower,
San Bernardino <i>menziesii</i>	Santa Cruz	<i>Erysimum</i>
San Diego Norte	Thistle, Chorro creek Bog	Del
Spineflower, Sonoma Humboldt <i>Chorizanthe valida</i>	<i>Cirsium fontinale</i> var. <i>obispoense</i>	
Mendocino	San Luis Obispo	
Marin Monterey Sonoma	Thistle, Fountain	
Gambel's Spurge, Hoover's <i>Chamaesyce hooveri</i>	<i>Cirsium fontinale</i> var. <i>fontinale</i>	Watercress,
Angeles	San Mateo	<i>Rorippa gambellii</i>
Butte	Santa Barbara	Los
Bernardino	Santa Clara	San
Colusa	Thistle, La Graciosa	San
Diego	<i>Cirsium loncholepis</i>	San Luis
Glenn		
Obispo	San Luis Obispo	Ventura
Merced Stanislaus	Santa Barbara	Woodland-star,
San Clemente	Thistle, Suisun	<i>Lithophragma</i>
Tehama <i>maximum</i>	<i>Cirsium hydrophilum</i> var. <i>hydrophilum</i>	Los
Tulare	Solano	Woolly-star, Santa
Angeles	Thornmint, San Diego	<i>Eriastrum</i>
Tuolumne	<i>Acanthomintha ilicifolia</i>	Orange
Ana River	San Diego	
Stickyseed, Baker's <i>densifolium</i> ssp.		
<i>Blennosperma bakeri</i>		
Sonoma Riverside		
Stonecrop, Lake County Bernardino	Thornmint, San Mateo	San
<i>Parvisedum leiocarpum</i>	<i>Acanthomintha obovata</i> ssp. <i>duttonii</i>	Woolly-threads,
San Joaquin		
Alameda	San Mateo	<i>Monolopia</i>

<i>(=Lembertia) congdonii</i>		
Contra Costa	Tuctoria, Green's	Fresno
Mendocino	<i>Tuctoria greenei</i>	Kern
Napa	Butte	Kings
Santa Barbara	Colusa	San
Benito		
Santa Clara	Glenn	San Luis
Obispo		
Solano	Madera	Santa
Barbara		
Sunflower, San Mateo Woolly	Mariposa	Tulare
<i>Eriophyllum latilobum</i>	Merced	Yerba Santa,
Lompoc		
San Mateo	Shasta	<i>Eriodictyon</i>
<i>capitatum</i>		
Taraxacum, California	Stanislaus	Santa
Barbara		
<i>Taraxacum californicum</i>	Tehama	<u>Gastropod</u>
San Bernardino	Tuolumne	Abalone, White
Tarplant, Gaviota	Vervain, California	<i>Haliothis sorenseni</i>
<i>Deinandra increscens</i> ssp. <i>villosa</i>	<i>Verbena californica</i>	Los
Angels		
Santa Barbara	Tuolumne	Orange
<b>Gastropod</b>	<b>Mammal</b>	<b>Mammal</b>
Clara	Kangaroo Rat, Giant	Santa
Santa Barbara	<i>Dipodomys ingens</i>	Solano
Ventura	Fresno	Sonoma
Snail, Morro Shoulderband	Kern	Rabbit, Riparian
Brush		
<i>Helminthoglypta walkeriana</i>	Kings	<i>Sylvilagus</i>
<i>bachmani riparius</i>		
San Luis Obispo	Merced	San
Joaquin		
<b>Mammal</b>	<b>Mammal</b>	<b>Mammal</b>
Bighorn	Monterey	Sheep, Peninsular
Fox, San Joaquin Kit	San Benito	<i>Ovis canadensis</i>
<i>Vulpes macrotis mutica</i>	San Luis Obispo	Imperial
Alameda	Santa Barbara	Mono
Contra Costa	Tulare	
Riverside		
Fresno	Kangaroo Rat, Morro Bay	San
Diego		
Kern	<i>Dipodomys heermanni morroensis</i>	Sheep, Sierra
Nevada Bighorn	San Luis Obispo	<i>Ovis canadensis</i>
Kings		
<i>californiana</i>		
Madera	Kangaroo Rat, San Bernardino	Mono
	Merriam's	San
Diego		
Merced		San
Diego		
Monterey	<i>Dipodomys merriami parvus</i>	Shrew, Buena Vista

Lake Ornate	Riverside	<i>Sorex ornatus</i>
<i>relictus</i>		<i>Sorex ornatus</i>
Napa		
<i>relictus</i>	San Bernardino	Kern
San Benito	Kangaroo Rat, Stephens' <i>Dipodomys stephensi</i> (incl. D.)	Kern
San Joaquin		Vole, Amargosa <i>Microtus</i>
<i>californicus scirpensis</i>		
San Luis Obispo		<i>Microtus</i>
<i>californicus scirpensis</i>	Riverside	San
Bernardino		
Santa Barbara		San
Bernardino	San Bernardino	
Santa Clara	San Diego	Woodrat, Riparian <i>Neotoma fuscipes</i>
<i>riparia</i>		
Stanislaus		<i>Neotoma fuscipes</i>
<i>riparia</i>		
Tulare	Kangaroo Rat, Tipton	San
Joaquin	<i>Dipodomys nitratoides nitratoides</i>	
Fox, San Miguel Island	Kern	<u>Monocot</u>
<i>Urocyon littoralis littoralis</i>		Alopecurus,
Sonoma		
Sonoma	Kings	Alopecurus,
Santa Barbara		
<i>aqualis</i> var. <i>sonomensis</i>		<i>Alopecurus</i>
Fox, Santa Catalina Island	Tulare	
<i>Urocyon littoralis catalinae</i>	Mountain Beaver, Point Arena	Marin
	<i>Aplodontia rufa nigra</i>	Sonoma
Los Angeles		
Canyon	Mendocino	Amole, Cammatta
Canyon		
Fox, Santa Cruz Island		Amole, Cammatta
<i>purpureum</i> var. <i>reductum</i>		
<i>Urocyon littoralis santacruzae</i>		<i>Chlorogalum</i>
Obispo	Mouse, Pacific Pocket	San Luis
Santa Barbara		
Fox, Santa Rosa Island		
<i>purpureum</i> var.		
<i>Urocyon littoralis santarosae</i>		
Santa Barbara	<i>Perognathus longimembris pacificus</i>	Amole, Purple
Monterey		
	Los Angeles	Amole, Purple
	Orange	
	<i>purpureum</i>	<i>Chlorogalum</i>
	San Diego	
	Monterey	<i>purpureum</i>
	Mouse, Salt Marsh Harvest	San Luis

Obispo		
Kangaroo Rat, Fresno	<i>Reithrodontomys raviventris</i>	San Luis
Obispo		
<i>Dipodomys nitratoides exilis</i>		Bluegrass, Napa
Fresno	Alameda	<i>Poa napensis</i>
Kings	Contra Costa	<i>Poa napensis</i>
Madera	Marin	Napa
Bernardino		Bluegrass, San
Merced	Napa	<i>Poa atropurpurea</i>
Bernardino	San Mateo	<i>Poa atropurpurea</i>
		San

<u>Monocot</u>	<u>Monocot</u>	<u>Mammal</u>
San Diego	Humboldt	
Montrose		
Brodiaea, Chinese Camp	Onion, Munz's	Mouse, Preble's
Meadow Jumping		
<i>Brodiaea pallida</i>	<i>Allium munzii</i>	<i>Zapus hudsonius</i>
<i>preblei</i>		
Tuolumne	Riverside	Boulder
Brodiaea, Thread-leaved	Piperia, Yadon's	Douglas
<i>Brodiaea filifolia</i>	<i>Piperia yadonii</i>	El Paso
Los Angeles	Monterey	Elbert
Orange	Sedge, White	
Jefferson		
Riverside	<i>Carex albida</i>	Larimer
San Bernardino	Sonoma	Weld
San Diego	<b>Colorado</b>	<b>Monocot</b>
Grass, California Orcutt		Ladies'-tresses,
Ute		
<i>Orcuttia californica</i>	<b>Dicot</b>	Ladies'-tresses,
Ute		<i>Spiranthes</i>
<i>diluvialis</i>		
Riverside	Butterfly Plant, Colorado	Boulder
San Diego	<i>Gaura neomexicana</i> var.	
Jefferson		
Ventura	Weld	Morgan
Grass, Colusa	Cactus, Knowlton	Weld
<i>Neostapfia colusana</i>	<i>Pediocactus knowltonii</i>	
Calaveras	La Plata	<b>Connecticut</b>
Mariposa	Cactus, Mesa Verde	<b>Bivalve</b>
Merced	<i>Sclerocactus mesae-verdae</i>	Mussel, Dwarf
Wedge	Montezuma	<i>Alasmidonta</i>
Solano		
<i>heterodon</i>		Hartford
Stanislaus	Cactus, Uinta Basin Hookless	<b>Dicot</b>
Tuolumne	<i>Sclerocactus glaucus</i>	
Yolo	Delta	Gerardia,

Sandplain		
Grass, San Joaquin Valley Orcutt	Garfield	
<i>Orcuttia inaequalis</i>	Mesa	<i>Agalinis acuta</i>
Windham		
Butte	Montrose	<u>Mammal</u>
Fresno	Milk-vetch, Mancos	
Madera	<i>Astragalus humillimus</i>	Bat, Indiana <i>Myotis sodalis</i>
Mariposa	Montezuma	
Merced	Wild-buckwheat, Clay-loving	Litchfield
Middlesex		
Sacramento	<i>Eriogonum pelinophilum</i>	Windha
m		
Solano	Delta	<u>Monocot</u>
Tulare	Montrose	
Grass, Solano	<u>Mammal</u>	Pogonia, Small
Whorled		
<i>Tuctoria mucronata</i>	Ferret, Black-footed	<i>Isotria medeoloides</i>
Solano	<i>Mustela nigripes</i>	Litchfield
Yolo	Delta	Litchfield
Lily, Pitkin Marsh	Garfield	Tolland
<i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	La Plata	<b>Delaware</b>
Sonoma	Mesa	<u>Mammal</u>
Peninsula Fox		Squirrel, Delmarva
Lily, Western	Moffat	<i>Sciurus niger</i>
<i>cineraceus</i>		
<i>Lilium occidentale</i>	Montezuma	Sussex

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<u>Monocot</u>	<u>Bivalve</u>	<u>Dicot</u>
Pink, Swamp	Threeridge, Fat (Mussel)	Lake
<i>Helonias bullata</i>	<i>Amblema neislerii</i>	Marion
Sussex	Calhoun	Orange
<b>Florida</b>	Gadsden	Osceola
	<u>Conf/cycds</u>	Polk
<b>Bivalve</b>		Butterwort,
Godfrey's	Torreya, Florida	Butterwort,
Godfrey's	<i>Torreya taxifolia</i>	<i>Pinguicula ionantha</i>
Bankclimber, Purple		Bay
<i>Elliptoideus sloatianus</i>		Bay
Calhoun	Gadsden	Campion, Fringed
Gadsden	Jackson	<i>Silene polypetala</i>
Jackson		<i>Silene polypetala</i>
Gadsden		
Leon		
American	Shrimp, Squirrel Chimney Cave	Chaffseed,
Wakulla	<i>Palaemonetes cummingi</i>	<i>Schwalbea</i>
<i>americana</i>		
Mussel, Gulf Moccasinshell	Alachua	
Gadsden		
<i>Medionidus penicillatus</i>		
Gadsden		
Calhoun	Aster, Florida Golden	Fringe Tree, Pygmy
<i>pygmaeus</i>		<i>Chionanthus</i>
Gadsden	<i>Chrysopsis floridana</i>	
Jackson		Hardee
Highlands	Hardee	
Mussel, Ochlockonee Moccasinshell	Hillsborough	Lake
<i>Medionidus simpsonianus</i>		
Gadsden	Pinellas	Osceola
Leon		Polk
Miccosukee	Bellflower, Brooksville	Gooseberry,
Wakulla	<i>Campanula robbinsiae</i>	
Mussel, Oval Pigtoe		<i>Ribes echinellum</i>
Jefferson		
<i>Pleurobema pyriforme</i>	Hernando	
Okeechobee	Birds-in-a-nest, White	
Alachua		
<i>okeechobeensis</i> ssp.	<i>Macbridea alba</i>	
Bay		Gourd,
Bradford	Bay	<i>Cucurbita</i>
Okeechobee		
Calhoun	Blazing Star, Scrub	<i>okeechobeensis</i>
	<i>Liatris ohlingerae</i>	
	Highlands	Palm

Beach	Columbia	Polk	Harebells, Avon
Park	Gadsden	Bonamia, Florida	<i>Crotalaria</i>
<i>avonensis</i>	Jackson Highlands	<i>Bonamia grandiflora</i>	
	Leon	Charlotte	Polk
	Washington	Hardee	Hypericum,
Highlands Scrub		Highlands	<i>Hypericum</i>
Mussel, Shiny-rayed Pocketbook		Lake	
<i>cumulicola</i>			
<i>Lampsilis subangulata</i>		Lee	Polk
Highlands	Calhoun	Marion	Jacquemontia,
	Gadsden		
Beach	Jackson	Orange	<i>Jacquemontia</i>
<i>reclinata</i>	Leon	Osceola	Broward
Slabshell, Chipola		Polk	Dade
<i>Elliptio chipolaensis</i>		Buckwheat, Scrub	Palm
Beach	Calhoun	<i>Eriogonum longifolium</i> var.	Lead-plant,
Crenulate		<i>gnaphalifolium</i>	Lead-plant,
Crenulate	Jackson	Highlands	<i>Amorpha crenulata</i>
		<b>Dicot</b>	<b>Dicot</b>
<b>Dicot</b>	Dade	Calhoun	Snakeroot
Lupine, Scrub		Jackson	<i>Eryngium</i>
<i>cuneifolium</i>			
<i>Lupinus aridorum</i>	Orange	Plum, Scrub	Collier
	Highlands	<i>Prunus geniculata</i>	
	Polk	Highlands	Putnam
Meadow Rue, Cooley's		Lake	Spurge, Deltoid
<i>Thalictrum cooleyi</i>		Osceola	<i>Chamaesyce</i>
<i>deltoides</i> ssp.	Walton	Polk	Dade
Milkpea, Small's		Polygala, Lewton's	Spurge, Garber's
<i>Galactia smallii</i>		<i>Polygala lewtonii</i>	<i>Chamaesyce</i>
<i>garberi</i>		Highlands	
	Dade	Lake	Dade
Mint, Garrett's		Marion	Spurge, Telephus
<i>Dicerandra christmanii</i>			<i>Euphorbia</i>
<i>telephioides</i>	Highlands	Osceola	Bay
Mint, Lakela's		Polk	<i>Warea</i> , Wide-leaf
<i>Dicerandra immaculata</i>	Indian River	Polygala, Tiny	<i>Warea amplexifolia</i>
	St. Lucie	<i>Polygala smallii</i>	Lake
Mint, Longspurred		Broward	Osceola
<i>Dicerandra cornutissima</i>		Dade	Polk
Cooley's		Martin	Water-willow,

Marion	Palm Beach	<i>Justicia cooleyi</i>
Mint, Scrub	St. Lucie	
Hernando		
<i>Dicerandra frutescens</i>	Prickly-apple, Fragrant	Whitlow-wort,
Papery		
Highlands	<i>Cereus eriophorus</i> var. <i>fragrans</i>	<i>Paronychia</i>
<i>chartacea</i>		
Mustard, Carter's	St. Lucie	
Highlands		
<i>Warea carteri</i>	Rhododendron, Chapman	Lake
Brevard	<i>Rhododendron chapmanii</i>	Orange
Highlands	Clay	Osceola
Polk	Gadsden	Polk
Pawpaw, Beautiful	Rosemary, Etonia	Wings, Pigeon
<i>Deeringothamnus pulchellus</i>	<i>Conradina etonia</i>	<i>Clitoria fragrans</i>
Charlotte	Putnam	
Highlands		
Lee	Rosemary, Short-leaved	Lake
Orange	<i>Conradina brevifolia</i>	Polk
Pawpaw, Four-petal	Highlands	Wireweed
<i>Asimina tetramera</i>	Polk	<i>Polygonella</i>
<i>basiramia</i>		
Martin	Sandlace	
Highlands		
Palm Beach	<i>Polygonella myriophylla</i>	Polk
St. Lucie	De Soto	Ziziphus, Florida
Pawpaw, Rugel's	Highlands	<i>Ziziphus celata</i>
<i>Deeringothamnus rugelii</i>	Orange	
Highlands		
Volusia	Osceola	Polk
Pinkroot, Gentian	Polk	<u>Lichen</u>
<i>Spigelia gentianoides</i>		

<u>Lichen</u>	<u>Mammal</u>	<u>Bivalve</u>
Cladonia, Florida Perforate <i>Cladonia perforata</i> Chattooga	Vole, Florida Salt Marsh <i>Microtus pennsylvanicus</i> <i>dukecampbelli</i>	Bartow
Highlands Cherokee Martin Okaloosa Palm Beach (Pearl mussel) Polk	Levy <u>Monocot</u> Beargrass, Britton's <i>Nolina brittoniana</i>	Floyd Murray Mucket, Pink
<b>Mammal</b>	Hernando Highlands	<i>Lampsilis abrupta</i> Calhoun Mussel, Acornshell
Southern Bat, Gray Southern <i>Myotis grisescens</i> <i>othcaloogensis</i> Jackson Chattooga	Lake Orange Osceola	<i>Epioblasma</i> Mussel, Alabama
Moccasinshell Bat, Indiana Moccasinshell <i>Myotis sodalis</i> <i>acutissimus</i> Jackson	Polk	<i>Medionidus</i> Bartow
Mouse, Anastasia Island Beach Chattooga	Seagrass, Johnson's <i>Halophila johnsonii</i> Chattooga	Floyd Murray Mussel, Coosa
<i>Peromyscus polionotus phasma</i> St. Johns	Brevard Broward Indian River	Mussel, Coosa
Moccasinshell Mouse, Choctawhatchee Beach Moccasinshell <i>Peromyscus polionotus allophys</i> <i>parvulus</i> Bay Chattooga Walton	Martin	<i>Medionidus</i> Palm Beach
Mouse, Perdido Key Beach	St. Lucie	Floyd Murray
<i>Peromyscus polionotus trissyllepsis</i> Pocketbook Escambia	<b>Georgia</b>	Mussel, Fine-lined
Mouse, Southeastern Beach <i>Peromyscus polionotus niveiventris</i>	<u>Bivalve</u> <i>Lampsilis altilis</i>	<i>Lampsilis altilis</i> Floyd
Brevard Moccasinshell Indian River <i>penicillatus</i> St. Lucie	Bankclimber, Purple <i>Elliptoideus sloatianus</i>	Murray
Coweta Crawford <i>Medionidus penicillatus</i> Decatur	Coweta Crawford <i>Medionidus penicillatus</i> Decatur	Mussel, Gulf
Lee	Lee	<i>Medionidus</i> Calhoun

Panther, Florida	Macon	Coweta
<i>Puma (=Felis) concolor coryi</i>		Decatur
Broward	Mitchell	Decatur
Charlotte	Worth	Fulton
Collier	Combshell, Upland	Fulton
Dade	<i>Epioblasma metstriata</i>	Harris
Meriwether	Bartow	Lee
Glades	Chattooga	Murray
Hendry	Floyd	Pike
Highlands	Murray	Webster
Lee	Fanshell	Worth
Pigtoe	<i>Cyprogenia stegaria</i>	Mussel, Oval
Osceola		Mussel, Oval
Pigtoe		<i>Pleurobema</i>
Palm Beach		
<i>pyriforme</i>	Lincoln	Coweta
Polk	Kidneyshell, Triangular	Coweta
	<i>Ptychobranchus greenii</i>	Early
		Lee

<u>Bivalve</u>	<u>Dicot</u>	<u>Dicot</u>
Macon	Columbia	Spiraea, Virginia
Meriwether	Douglas	<i>Spiraea virginiana</i>
Webster	Gwinnett	Walker
Worth	Hancock	Sumac, Michaux's
Mussel, Ovate Clubshell	Harris	<i>Rhus michauxii</i>
<i>Pleurobema perovatum</i>	Heard	Elbert
Bartow	Henry	<u>Ferns</u>
Cherokee	Jackson	
spored		Quillwort, Black-
Floyd	Meriwether	<i>Isoetes</i>
<i>melanospora</i>		Gwinnett
Murray	Newton	Heard
Mussel, Shiny-rayed Pocketbook	Oglethorpe	Jackson
<i>Lampsilis subangulata</i>	Pike	Newton
Coweta	Walton	Pike
Decatur	Barbara Buttons, Mohr's	Quillwort, Mat-
Early	<i>Marshallia mohrii</i>	
forming	Cherokee	<i>Isoetes</i>
Fulton		
<i>tegetiformans</i>	Floyd	
Lee		Gwinnett
Columbia	Walker	Hancock
Macon	Campion, Fringed	Jackson
Meriwether	<i>Silene polypetala</i>	<u>Mammal</u>
Pike	Crawford	
Webster	Decatur	Bat, Gray
Worth	Talbot	<i>Myotis grisescens</i>
Mussel, Southern Clubshell	Upson	Bartow
<i>Pleurobema decisum</i>		
Chattooga	Dropwort, Canby's	
Chattooga		Cherokee
Cherokee	<i>Oxypolis canbyi</i>	
e		
Floyd	Burke	Floyd
Murray	Lee	Gwinnett
Mussel, Southern Pigtoe	Screvan	Haralson
<i>Pleurobema georgianum</i>	Pitcher-plant, Green	Murray
Chattooga	<i>Sarracenia oreophila</i>	Paulding
Floyd	Chattooga	Pickens
Murray	Towns	Upson
Threeridge, Fat (Mussel)	Troup	Walker
<i>Amblema neislerii</i>	Rattleweed, Hairy	
Decatur	<i>Baptisia arachnifera</i>	Bat, Indiana

Macon		Brantley	<i>Myotis sodalis</i>
<b><u>Conf/cycds</u></b>			Banks
Torreya, Florida			Barrow
<i>Torreya taxifolia</i>			Bartow
			Calhoun
Decatur		Chattooga	Carroll
<b><u>Dicot</u></b>		Floyd	
Chattooga			
Amphianthus, Little		Murray	
Cherokee		Cherokee	
<i>Amphianthus pusillus</i>			
		Walker	
<b><u>Mammal</u></b>		<b><u>Mammal</u></b>	Clayton
Cobb		Clinch	
Coweta		<b><u>Monocot</u></b>	Kauai
Crawford		Grass, Tennessee Yellow-eyed	
Douglas		<i>Xyris tennesseensis</i>	(ncn)
Early		Bartow	<i>Keysseria erici</i>
Fayette		Pink, Swamp	Kauai
<i>eremitopetalum</i> (ncn)		<i>Helonias bullata</i>	Abutilon
Floyd		Rabun	
<i>eremitopetalum</i>		Pogonia, Small Whorled	Maui
Forsyth		<i>Isotria medeoloides</i>	
Fulton			Abutilon
sandwicense (ncn)		Bartow	
Gwinnett		Chattooga	Honolulu
<i>sandwicense</i>		Cherokee	<i>Achyranthes mutica</i>
Habersham		Floyd	
Hall		Habersham	<i>Achyranthes mutica</i>
(ncn)		Lumpkin	Hawaii
Haralson		Murray	<i>Achyranthes</i>
Harris		Pickens	
Heard		Rabun	Honolulu
<i>splendens</i> var.		Towns	
Henry		Union	<i>A'e (Zanthoxylum</i>
Jackson		<i>tomentosum</i>	
<i>splendens</i> var.		Walker	Hawaii
Jasper		White	<i>A'e (Zanthoxylum</i>
Lumpkin			
<i>dipetalum</i> var.		Trillium, Persistent	<i>A'e (Zanthoxylum</i>
Madison		<i>Trillium persistens</i>	
Meriwether		Habersham	Hawaii
<i>dipetalum</i> var.			Kauai
Monroe			
Morgan			
<i>hawaiense</i> )			
Murray			
<i>hawaiense</i> )			
<i>hawaiense</i>			
Newton			
Oconee			

Paulding Pickens	Rabun	Maui
( <i>Nothocestrum breviflorum</i> ) Pike ( <i>Nothocestrum breviflorum</i> )  <i>breviflorum</i>	Trillium, Relict  <i>Trillium reliquum</i>	'Aiea  <i>Nothocestrum</i>
Quitman Rabun ( <i>Nothocestrum peltatum</i> ) Schley ( <i>Nothocestrum peltatum</i> )  <i>peltatum</i>	Columbia Early  Lee	Hawaii 'Aiea  <i>Nothocestrum</i>
Talbot Towns Troup	Macon Quitman Talbot	Kauai Akoko Akoko <i>Chamaesyce remyi</i>
<i>var. kauaiensis</i> Union Upson  Walker	Upson  Water-plantain, Kral's <i>Sagittaria secundifolia</i>	Kauai  'akoko 'akoko <i>Chamaesyce</i>
<i>eleanoriae</i> Walton Webster White ( <i>Chamaesyce celastroides</i>  Bat, Virginia Big-eared <i>celastroides</i> var. <i>Corynorhinus</i> (= <i>Plecotus</i> ) <i>townsendii virginianus</i>	Chattooga  <b>Hawaii</b>  <u>Crustacean</u>  Amphipod, Kauai Cave Amphipod, Kauai Cave <i>Spelaeorchestia koloana</i>	Kauai Kauai  'Akoko  var. kaenana) <i>Chamaesyce</i>  Honolulu Honolulu

### Dicot

'Akoko (*Chamaesyce deppeana*)

*Chamaesyce deppeana*

Honolulu

(*Isodendrion longifolium*)

'Akoko (*Chamaesyce herbstii*)  
*longifolium*

*Chamaesyce herbstii*

Honolulu

'Akoko (*Chamaesyce kuwaleana*)

*Chamaesyce kuwaleana*  
*napaliensis*

Honolulu

'Akoko (*Chamaesyce rockii*)

(*Canavalia molokaiensis*)

*Chamaesyce rockii*  
*molokaiensis*

Honolulu

'Akoko (*Chamaesyce skottsbergii* var.

*sebaeoides*)

skottsbe

*sebaeoides*

*Chamaesyce skottsbergii* var.  
*kalaeloana*

Honolulu

Maui

*cookiana*)

'Akoko (*Euphorbia haeleeleana*)

*Euphorbia haeleeleana*

Honolulu

Kauai

(ncn)

alani

*Melicope degeneri*

Kauai

Alani (*Melicope adscendens*)

*Melicope adscendens*

Maui

Halemanui (ncn)

Alani (*Melicope balloui*)  
*halemanui*

*Melicope balloui*

Maui

(ncn)

Alani (*Melicope haupuensis*)

*Melicope haupuensis*

Kauai

*rhytidisperma* (ncn)

Alani (*Melicope knudsenii*)  
*rhytidisperma*

*Melicope knudsenii*

Kauai

### Dicot

Alani (*Melicope munroi*)

*Melicope munroi*

Maui

Alani (*Melicope ovalis*)

*Melicope ovalis*

Maui

Alani (*Melicope pallida*)

*Melicope pallida*

Kauai

Alani (*Melicope quadrangularis*)

*Melicope quadrangularis*

Kauai

Alani (*Melicope reflexa*)

*Melicope reflexa*

Maui

Maui

Alani (*Melicope saint-johnii*)

*Melicope saint-johnii*

Honolulu

Alani (*Melicope zahlbruckneri*)

*Melicope zahlbruckneri*

Hawaii

*Alsinidendron obovatum* (ncn)

*Alsinidendron obovatum*

Honolulu

*Alsinidendron trinerve* (ncn)

*Alsinidendron trinerve*

Honolulu

*Alsinidendron viscosum* (ncn)

*Alsinidendron viscosum*

Kauai

Amaranthus brownii (ncn)

*Amaranthus brownii*

Honolulu

'Anaunau (*Lepidium arbuscula*)

*Lepidium arbuscula*

Honolulu

### Dicot

Honolulu

Kauai

Aupaka

*Isodendrion*

Honolulu

Kauai

awikiwiki

*Canavalia*

Kauai

'Awikiwiki

*Canavalia*

Maui

'Awiwi (*Centaurium*)

*Centaurium*

Kauai

Kauai

Maui

'Awiwi (*Hedyotis*)

*Hedyotis cookiana*

Hawaii

Kauai

*Bonamia menziesii*

*Bonamia menziesii*

Hawaii

Honolulu

Kauai

Maui

Chamaesyce

*Chamaesyce*

Kauai

*Cyanea undulata*

Kauai

*Delissea*

'Anaunau

*Lepidium arbuscula*

Kauai

*Dubautia latifolia*

(ncn)			
	Maui	'Anunu ( <i>Sicyos alba</i> )	<i>Dubautia latifolia</i>
		<i>Sicyos alba</i>	Kauai
Alani (Melicope lydgatei)		Hawaii	Dubautia
<i>Melicope lydgatei</i>			
pauciflorula (ncn)		Aupaka ( <i>Isodendrion hosakae</i> )	<i>Dubautia</i>
Honolulu			
<i>pauciflorula</i>		<i>Isodendrion hosakae</i>	Kauai
Alani (Melicope mucronulata)		Hawaii	Geranium,
<i>Melicope mucronulata</i>			
Hawaiian Red-flowered		Aupaka ( <i>Isodendrion laurifolium</i> )	<i>Geranium</i>
Maui			
<i>arboreum</i>		<i>Isodendrion laurifolium</i>	Maui
<b>Dicot</b>		<b>Dicot</b>	<b>Dicot</b>
Gouania hillebrandii (ncn)		Haha ( <i>Cyanea hamatiflora</i> ssp.	Haha ( <i>Cyanea</i>
<i>stictophylla</i> )			
<i>Gouania hillebrandii</i>		carlsonii)	<i>stictophylla</i>
Maui		<i>Cyanea hamatiflora carlsonii</i>	Hawaii
		Hawaii	
Gouania meyenii (ncn)			Haha ( <i>Cyanea St-</i>
Johnii)			(=Rollandia St-
<i>Gouania meyenii</i>		Haha ( <i>Cyanea hamatiflora</i> ssp.	
Johnii)			
Honolulu		hamatiflora)	<i>Cyanea st-johnii</i>
Kauai		<i>Cyanea hamatiflora</i> ssp. <i>hamatiflora</i>	<i>Cyanea st-johnii</i>
Gouania vitifolia (ncn)		Maui	Honolulu
<i>superba</i> )		Haha ( <i>Cyanea humboldtiana</i> )	Haha ( <i>Cyanea</i>
<i>Gouania vitifolia</i>			
Honolulu		<i>Cyanea humboldtiana</i>	<i>superba</i>
haha		Honolulu	Honolulu
( <i>Cyrtandra crenata</i> )		Haha ( <i>Cyanea koolauensis</i> )	Ha'iwale
<i>Cyanea eleeleensis</i>			
Kauai		<i>Cyanea koolauensis</i>	<i>Cyrtandra crenata</i>
		Honolulu	Honolulu
Haha ( <i>Cyanea acuminata</i> )		Haha ( <i>Cyanea longiflora</i> )	Ha'iwale
( <i>Cyrtandra dentata</i> )			
<i>Cyanea acuminata</i>		<i>Cyanea longiflora</i>	<i>Cyrtandra dentata</i>
Honolulu		Honolulu	Honolulu
Haha ( <i>Cyanea asarifolia</i> )		Haha ( <i>Cyanea Macrostegia</i> var.	Ha'iwale
( <i>Cyrtandra giffardii</i> )			
<i>Cyanea asarifolia</i>		gibsonii)	<i>Cyrtandra giffardii</i>
Kauai		<i>Cyanea macrostegia</i> ssp. <i>gibsonii</i>	Hawaii
Haha ( <i>Cyanea copelandii</i> ssp.		Maui	Ha'iwale
( <i>Cyrtandra limahuliensis</i> )			
<i>copelandii</i> )			
<i>limahuliensis</i>		Haha ( <i>Cyanea mannii</i> )	<i>Cyrtandra</i>
<i>Cyanea copelandii</i> ssp. <i>copelandii</i>		<i>Cyanea mannii</i>	Kauai
Hawaii		Maui	Ha'iwale
( <i>Cyrtandra munroi</i> )			
Haha ( <i>Cyanea copelandii</i> ssp.		Haha ( <i>Cyanea mcedowneyi</i> )	<i>Cyrtandra munroi</i>
<i>haleakalaensis</i> )		Haha ( <i>Cyanea mcedowneyi</i> )	
<i>Cyanea copelandii</i> ssp.		<i>Cyanea mcedowneyi</i>	Maui
Maui			
( <i>Cyrtandra polyantha</i> )		Maui	Ha'iwale

<i>polyantha</i>		<i>Cyrtandra</i>
Haha (Cyanea Crispa) (=Rollandia crispa)	Haha (Cyanea pinnatifida) <i>Cyanea pinnatifida</i>	Honolulu
<i>Cyanea (=Rollandia) crispa</i> (Cyrtandra subumbellata)	Honolulu	Ha'lwale
Honolulu		
<i>subumbellata</i>	Haha (Cyanea platiphylla) <i>Cyanea platiphylla</i>	<i>Cyrtandra</i>
Haha (Cyanea dunbarii)	Hawaii	Honolulu
<i>Cyanea dunbarii</i> (Cyrtandra tintinnabula)	Haha (Cyanea procera) <i>Cyanea procera</i>	Ha'lwale
Maui	Maui	<i>Cyrtandra</i>
<i>tintinnabula</i>	Haha (Cyanea recta) <i>Cyanea recta</i>	Honolulu
Haha (Cyanea glabra)	Kauai	Ha'lwale
<i>Cyanea glabra</i> (Cyrtandra viridiflora)	Haha (Cyanea remyi) <i>Cyanea remyi</i>	<i>Cyrtandra viridiflora</i>
Maui	Kauai	Honolulu
Haha (Cyanea grimesiana ssp.		Haplostachys
grimesiana)	Haha (Cyanea shipmanii) <i>Cyanea shipmannii</i>	<i>Hibiscadelphus</i>
Haplostachya (ncn)	Hawaii	Kauai
<i>Cyanea grimesiana</i> ssp. <i>grimesiana</i>	<b>Dicot</b>	<b>Dicot</b>
haplostachya		
Honolulu	Kamakahala (Labordia cyrtandrae)	Koki'o Ke'oke'o
Maui		
(Hibiscadelphus woodi)	<i>Labordia cyrtandrae</i>	ssp. <i>hannerae</i> )
Haha (Cyanea grimesiana ssp.	Honolulu	<i>Hibiscus waimeae</i>
woodii		
<i>Cyanea grimesiana</i> ssp. <i>obatae</i>	<b>Dicot</b>	Kauai
Honolulu	Kamakahala (Labordia lydgatei) <i>Labordia lydgatei</i>	kolea
<b>Dicot</b>	Kauai	<i>Myrsine mezii</i>
Hau Kuahiwi (Hibiscadelphus		Kauai
(Hibiscus waimeae		
<i>Hibiscadelphus distans</i>	Kamakahala (Labordia tinifolia var.	Kolea (Myrsine
Kauai	lanaiensis)	<i>juddii</i>
<i>ssp. hannerae</i>	<i>Labordia tinifolia</i> var. <i>lanaiensis</i>	Honolulu
Heau (Exocarpos luteolus)	Maui	
<i>Exocarpos luteolus</i>	Kamakahala (Labordia tinifolia var.	Kolea (Myrsine
Kauai	wahiawaen)	<i>linearifolia</i>
Hedyotis degeneri (ncn)	<i>Labordia tinifolia</i> var.	<i>Myrsine linearifolia</i>
<i>Hedyotis degeneri</i>	Kauai	<i>Myrsine linearifolia</i>
juddii)		Kauai
Honolulu	Kamakahala (Labordia triflora)	Ko'oko'olau (Bidens
Hedyotis parvula (ncn)		
<i>Hedyotis parvula</i>		
linearifolia)		
Honolulu	Kauai	kalealaha)
Hedyotis St.-Johnii (ncn)		
<i>Hedyotis st.-johnii</i>		
micrantha ssp.		

Kauai	<i>Labordia triflora</i>	<i>Bidens micrantha</i>
<i>ssp. kalealaha</i>		
Hesperomannia arborescens (ncn)	Maui	Maui
<i>Hesperomannia arborescens</i>		
wiebkei)	Kanaloa kahoolawensis (ncn)	Ko'oko'olau (Bidens
Honolulu	<i>Kanaloa kahoolawensis</i>	<i>wiebkei</i>
Maui	Maui	Maui
Hesperomannia arbuscula (ncn)	Kaula (Colubrina oppositifolia)	Ko'oloa'ula
(Abutilon menziesii)		
<i>Hesperomannia arbuscula</i>	<i>Colubrina oppositifolia</i>	<i>Abutilon menziesii</i>
Honolulu	Hawaii	Hawaii
Maui		Maui
Hesperomannia lydgatei (ncn)	Kaulu (Pteralyxia kauaiensis)	Maui
schlechtendahliana	<i>Pteralyxia kauaiensis</i>	Kopa (Hedyotis
<i>Hesperomannia lydgatei</i>		var. remyi)
Kauai	Kauai	var. remyi)
<i>schlechtendahliana</i> var.		<i>Hedyotis</i>
Hibiscus, Clay's	Kio'Ele (Hedyotis coriacea)	Maui
<i>Hibiscus clayi</i>	<i>Hedyotis coriacea</i>	
Kauai	Hawaii	kopiko
<i>grandiflora</i>	Maui	copiko
Hiiwale		<i>Psychotria</i>
<i>Cyrtandra oenobarba</i>	Kiponapona (Phyllostegia racemosa)	Kauai
(Alsinidendron	<i>Phyllostegia racemosa</i>	Kuawawaenohu
Kauai	Hawaii	
<i>lychnoides</i>		<i>lychnoides</i> )
ho'awa	Koki'o (Kokia drynarioides)	Kauai
<i>Pittosporum napaliense</i>	<i>Kokia drynarioides</i>	Kauai
Kauai	Hawaii	Kulu'l (Nototrichium
humile) <i>Nototrichium humile</i>	Koki'o (Kokia kauaiensis)	Honolulu
Holei ( <i>Ochrosia kilaueaensis</i> )	<i>Kokia kauaiensis</i>	Honolulu
<i>Ochrosia kilaueaensis</i>	Kauai	Maui
Hawaii	Koki'o Ke'oke'o ( <i>Hibiscus amottianus</i>	Laukahi Kuahiwi
Iliau ( <i>Wilkesia hobdyi</i> )	ssp. <i>immaculatus</i> )	<i>Plantago</i>
( <i>Plantago</i>		
<i>Wilkesia hobdyi</i>	<i>Hibiscus amottianus</i> ssp.	Hawaii
<i>hawaiensis</i>	Maui	Laukahi Kuahiwi
Kauai		
kamakahala		<i>Plantago princeps</i>
( <i>Plantago</i>		Honolulu
<i>Labordia helleri</i>		
Kauai		<u>Dicot</u>
<u>Dicot</u>	<u>Dicot</u>	
Kauai	Hawaii	Maui
Maui	Honolulu	Nehe (Lipochaeta
fauriei)	Maui	
Laulihilihi ( <i>Schiedea stellaroides</i> )	Ma'o'o'ioli ( <i>Schiedea apokremnos</i> )	<i>Lipochaeta fauriei</i>
<i>Schiedea stellaroides</i>	<i>Schiedea apokremnos</i>	Kauai
Kauai	Kauai	Nehe (Lipochaeta
kamolensis)		
Iehua makanoe		<i>Lipochaeta</i>

<i>kamolensis</i>		
<i>Lysimachia daphnoides</i>	<i>Ma'oli'oli (Schiedea kealiae)</i>	<i>Maui</i>
Kauai	<i>Schiedea kealiae</i>	<i>Nehe (Lipochaeta</i>
lobata var.	Honolulu	
<i>Lipochaeta venosa</i> (ncn)	<i>Mapele (Cyrtandra cyaneoides)</i>	<i>leptophylla)</i>
<i>Lipochaeta venosa</i>		<i>Lipochaeta lobata</i>
var. <i>leptophylla</i>		
Hawaii	<i>Cyrtandra cyaneoides</i>	<i>Honolulu</i>
<i>Lobelia monostachya</i> (ncn) <i>micrantha</i> )	Kauai	<i>Nehe (Lipochaeta</i>
<i>Lobelia monostachya</i> <i>micrantha</i>	Mehamehame ( <i>Flueggea</i>	<i>Lipochaeta</i>
Honolulu		
<i>Lobelia niihauensis</i> (ncn) <i>tenuifolia</i> )	<i>Flueggea neowawraea</i>	<i>Kauai</i>
<i>Lobelia niihauensis</i> <i>tenuifolia</i>	Hawaii	<i>Nehe (Lipochaeta</i>
Honolulu	Honolulu	<i>Lipochaeta</i>
Kauai	Kauai	Honolulu
waimeaensis)	Maui	<i>Nehe (Lipochaeta</i>
<i>waimeaensis</i>		<i>Lipochaeta</i>
<i>Lobelia oahuensis</i> (ncn)	<i>Munroidendron racemosum</i> (ncn)	<i>Kauai</i>
<i>Lobelia oahuensis</i>	<i>Munroidendron racemosum</i>	
Honolulu	Kauai	<i>Neraudia angulata</i>
(ncn)		<i>Neraudia angulata</i>
<i>Lysimachia filifolia</i> (ncn)	na`ena`e	
<i>Lysimachia filifolia</i>	<i>Dubautia imbricata imbricata</i>	Honolulu
Honolulu	Kauai	<i>Neraudia ovata</i>
(ncn)		<i>Neraudia ovata</i>
Kauai	Na`ena`e ( <i>Dubautia herbstobatae</i> )	Hawaii
<i>Lysimachia lydgatei</i> (ncn)	<i>Dubautia herbstobatae</i>	
Honolulu	Honolulu	<i>Neraudia sericea</i>
Maui	Na`ena`e ( <i>Dubautia plantaginea</i> ssp. humilis)	
	<i>Dubautia plantaginea</i> ssp. <i>humilis</i>	Hawaii
		Maui
<i>Lysimachia maxima</i> (ncn)	Maui	<i>Neraudia sericea</i>
<i>Lysimachia maxima</i>		
koolauensis)	Nani Wai'ale'ale ( <i>Viola kauaensis</i>	
Maui		<i>Eugenia</i>
<i>koolauensis</i>	var. <i>wahiawaensis</i> )	Honolulu
	<i>Viola kauaiensis</i> var. <i>wahiawaensis</i>	
<i>Mahoe</i> ( <i>Alectryon macrococcus</i> )	Kauai	<i>nohoanu</i>
<i>Alectryon macrococcus</i>		<i>Geranium</i>
<i>kauaiense</i>	Nanu ( <i>Gardenia mannii</i> )	<i>Geranium</i>
Honolulu	<i>Gardenia mannii</i>	
<i>kauaiense</i>	Honolulu	<i>Kauai</i>
Kauai	<i>Geranium multiflorum</i>	<i>Kauai</i>
Maui		
( <i>Geranium multiflorum</i> )	Na'u ( <i>Gardenia brighamii</i> )	Nohoanu
<i>Makou</i> ( <i>Peucedanum sandwicense</i> )	<i>Gardenia brighamii</i>	Hawaii
<i>Peucedanum sandwicense</i>		Hawaii

Honolulu	Honolulu	Maui
Kauai	Maui	'Oha (Delissea)
rivularis) <i>Delissea rivularis</i>		
Maui		
Ma'o Hau Hele (Hibiscus <i>Hibiscus brackenridgei</i>	Naupaka, Dwarf (Scaevola coriacea) <i>Scaevola coriacea</i>	<i>Delissea rivularis</i>
<b>Dicot</b>	<b>Dicot</b>	<b>Dicot</b>
'Oha (Delissea subcordata) <i>mannii)</i>		Pilo (Hedyotis)
<i>Delissea subcordata</i>		<i>Hedyotis mannii</i>
Honolulu	Kauai	Maui
'Oha (Delissea undulata)	Opuhe (Urera kaalae)	pilo kea lau li'i
<i>Delissea undulata</i>	<i>Urera kaalae</i>	<i>Platydesma</i>
<i>rostrata</i>	Honolulu	
Hawaii	Pamakani (Viola chamissoniana ssp.	
	<i>chamissoniana)</i>	Kauai
'Oha (Lobelia gaudichaudii <i>sclerocarpa</i> )	<i>Viola chamissoniana ssp.</i>	Po'e (Portulaca)
Koolauensis)	<i>chamissoniana</i>	<i>Portulaca</i>
<i>sclerocarpa</i>	Honolulu	<i>Portulaca</i>
Lobelia gaudichaudii ssp. <i>sclerocarpa</i>		Hawaii
Honolulu	Papala	
'Oha Wai (Clermontia (Solanum	<i>Charpentiera densiflora</i>	Maui
<i>Clermontia drepanomorpha</i>		Popolo 'Aiakeakua
(Solanum	Kauai	
Hawaii	Phyllostegia hirsuta (ncn)	
<i>sandwicense</i>		
'Oha Wai (Clermontia lindseyana)	Phyllostegia hirsuta	Honolulu
<i>Clermontia lindseyana</i>		Honolulu
Hawaii	Honolulu	Kauai
(Solanum	Phyllostegia kaalaensis (ncn)	Popolo Ku Mai
Maui	Phyllostegia kaalaensis	
<i>incompletum</i>	Honolulu	<i>Solanum</i>
'Oha Wai (Clermontia oblongifolia ssp. brevipes)	Phyllostegia knudsenii (ncn)	Hawaii
rockii)		Hawaii
<i>Clermontia oblongifolia ssp. brevipes</i>	Phyllostegia knudsenii	Pua'ala (Brighamia)
Maui	Kauai	
'Oha Wai (Clermontia oblongifolia (ncn)	Phyllostegia mannii (ncn)	
<i>ssp. mauiensis</i>	Phyllostegia mannii	Brighamia rockii
(ncn)		Maui
<i>Clermontia oblongifolia ssp.</i>		Remya kauaiensis
Maui	Maui	
montgomeryi (ncn)	Phyllostegia mollis (ncn)	Remya kauaiensis
'Oha Wai (Clermontia peleana)	Phyllostegia mollis	Kauai
montgomeryi (ncn)		Kauai
<i>Clermontia peleana</i>		Remya
<i>montgomeryi</i>		Remya

Hawaii	Honolulu	Kauai
'Oha Wai ( <i>Clermontia pyrularia</i> )	<i>Phyllostegia parviflora</i> (ncn)	Remya, Maui
<i>Clermontia pyrularia</i>	<i>Phyllostegia parviflora</i>	<i>Remya maulensis</i>
Hawaii	Honolulu	Maui
'Oha Wai ( <i>Clermontia samuelii</i> )	<i>Phyllostegia velutina</i> (ncn)	Sandalwood, Lanai
(='Iliahi)	<i>Phyllostegia velutina</i>	
<i>Clermontia samuelii</i>		<i>Santalum</i>
<i>freycinetianum</i> var.		
Maui	Hawaii	Maui
'Ohai ( <i>Sesbania tomentosa</i> )	<i>Phyllostegia waimeae</i> (ncn)	<i>Sanicula mariversa</i>
(ncn)	<i>Phyllostegia waimeae</i>	
<i>Sesbania tomentosa</i>	Kauai	<i>Sanicula mariversa</i>
Hawaii		Honolulu
Honolulu		<i>Sanicula purpurea</i>
(ncn)		
Kauai	<i>Phyllostegia warshaweri</i> (ncn)	<i>Sanicula purpurea</i>
Maui	<i>Phyllostegia warshaweri</i>	<i>Sanicula purpurea</i>
'Ohe'ohe ( <i>Tetraplasandra haleakalensis</i> (ncn))	Hawaii	Maui
<i>Tetraplasandra gymnocarpa haleakalensis</i>	<i>Phyllostegia wawrana</i> (ncn)	Schiedea
Honolulu	<i>Phyllostegia wawrana</i>	
'Olulu ( <i>Brighamia insignis</i> )	Kauai	<i>Schiedea</i>
(ncn)		
<i>Brighamia insignis</i>		Maui
		<i>Schiedea helleri</i>
		<i>Schiedea helleri</i>
<b>Dicot</b>	<b>Dicot</b>	<b>Dicot</b>
Kauai	<i>Silene lanceolata</i> (ncn)	<i>Tetramolopium</i>
capillare (ncn)	<i>Silene lanceolata</i>	
<i>Schiedea hookeri</i> (ncn)	Hawaii	<i>Tetramolopium</i>
<i>capillare</i>	Honolulu	
<i>Schiedea hookeri</i>		Maui
Honolulu		<i>Tetramolopium</i>
filiforme (ncn)	Kauai	
<i>Schiedea kaalae</i> (ncn)		<i>Tetramolopium</i>
<i>filiforme</i>		
<i>Schiedea kaalae</i>	Maui	Honolulu
Honolulu	<i>Silene perlmutteri</i> (ncn)	<i>Tetramolopium</i>
lepidotum ssp.	<i>Silene perlmutteri</i>	
<i>Schiedea kauaiensis</i> (ncn)	Honolulu	<i>lepidotum</i> (ncn)
<i>Schiedea kauaiensis</i>		<i>Tetramolopium</i>
<i>lepidotum</i> ssp.		
Kauai	<i>Silversword, Haleakala ('Ahinahina)</i>	Honolulu
<i>Schiedea lydgatei</i> (ncn)	<i>Argyroxiphium sandwicense</i> ssp.	
remyi (ncn)	<i>macrocephalum</i>	<i>Tetramolopium</i>
<i>Schiedea lydgatei</i>		
remyi		<i>Tetramolopium</i>
Maui	Hawaii	
<i>remyi</i>		<i>Tetramolopium</i>
<i>Schiedea membranacea</i> (ncn)	Maui	Maui
rockii (ncn)		<i>Tetramolopium</i>
<i>Schiedea membranacea</i>		
rockii (ncn)	<i>Silversword, Ka'u (Argyroxiphium</i>	<i>Tetramolopium</i>

	kauense)	<i>Tetramolopium</i>
<i>rockii</i>		
Kauai		
<i>Schiedea nuttallii</i> (ncn)	<i>Argyroxiphium kauense</i>	Maui
<i>singularis</i> (ncn)	Hawaii	<i>Trematolobelia</i>
<i>Schiedea nuttallii</i>		<i>Trematolobelia</i>
<i>singularis</i>		<i>Trematolobelia</i>
	Silversword, Mauna Kea ('Ahinahina)	
<i>singularis</i>		
Honolulu	<i>Argyroxiphium sandwicense</i> ssp.	Honolulu
Kauai	<i>sandwicense</i>	
		Uhiuhi ( <i>Caesalpinia</i> )
kawaiensis)		
<i>Schiedea sarmentosa</i> (ncn)	Hawaii	<i>Caesalpinia</i>
<i>kawaiense</i>		
<i>Schiedea sarmentosa</i>		Hawaii
Maui		Honolulu
<i>Schiedea spergulina</i> var. <i>leiopoda</i>	<i>Spermolepis hawaiiensis</i> (ncn)	
	<i>Spermolepis hawaiiensis</i>	
		Maui
<i>Schiedea spergulina</i> var. <i>leiopoda</i>	Hawaii	
glabra var.		Ulihi ( <i>Phyllostegia</i> )
Kauai		
<i>Schiedea spergulina</i> var. <i>spergulina</i>	Honolulu	<i>Ianaiensis</i>
var. <i>lanaiensis</i>	Kauai	<i>Phyllostegia glabra</i>
(ncn)		
<i>Schiedea spergulina</i> var.	Maui	Maui
( <i>Vicia menziesii</i> )	<i>Stenogyne angustifolia</i> (ncn)	Vetch, Hawaiian
Kauai		
<i>Schiedea verticillata</i> (ncn)	<i>Stenogyne angustifolia</i> var.	<i>Vicia menziesii</i>
<i>Schiedea verticillata</i>	Hawaii	Hawaii
(ncn)		
Honolulu	<i>Stenogyne bifida</i> (ncn)	<i>Vigna o-wahuensis</i>
<i>Schiedea</i> , Diamond Head		
( <i>Schiedea adamantis</i> )	<i>Stenogyne bifida</i>	<i>Vigna o-wahuensis</i>
<i>Schiedea adamantis</i>	Maui	Hawaii
Honolulu		
<i>Silene alexandri</i> (ncn)	<i>Stenogyne campanulata</i> (ncn)	Kauai
<i>Silene alexandri</i>	<i>Stenogyne campanulata</i>	Maui
Maui	Kauai	
(ncn)		Viola helenae (ncn)
<i>Silene hawaiiensis</i> (ncn)	<i>Stenogyne kanehoana</i> (ncn)	Viola helenae (ncn)
(ncn)	<i>Stenogyne kanehoana</i>	Viola helenae
<i>Silene hawaiiensis</i>	Honolulu	Kauai
Hawaii		Viola lanaiensis
(ncn)	Tetramolopium arenarium (ncn)	Viola lanaiensis
	Tetramolopium arenarium	Maui
	Hawaii	Viola oahuensis
		Viola oahuensis

<u>Dicot</u>	<u>Ferns</u>	<u>Gastropod</u>
Honolulu (Achatinella Wahine Noho Kula ( <i>Isodendron pyrifolium</i> ) <i>Isodendron pyrifolium</i> (Achatinella Hawaii	<i>Pteris lidgatei</i> (ncn)  <i>Pteris lidgatei</i> Honolulu Maui	Snail, O'ahu Tree  <i>Achatinella cestus</i> Honolulu Snail, O'ahu Tree  <i>concavospira</i> )
Xylosma crenatum (ncn) <i>concavospira</i>  <i>Xylosma crenatum</i> Kauai (Achatinella curta)	Wawae'lole ( <i>Phlegmariurus =Huperzia</i> manni)  <i>Huperzia manni</i> Hawaii	<i>Achatinella</i>  Honolulu Snail, O'ahu Tree
<u>Ferns</u> Asplenium fragile var. insulare (ncn)  <i>Asplenium fragile var. insulare</i> (Achatinella Hawaii	Maui Wawae'lole ( <i>Phlegmariurus =Lycopodium</i> nutans)  <i>Lycopodium (=Phlegmariurus) nutans</i> Honolulu	<i>Achatinella curta</i> Honolulu Snail, O'ahu Tree  <i>decipiens</i> <i>Achatinella</i> Honolulu Honolulu
<i>decipiens</i> Diellia erecta (ncn)  <i>Diellia erecta</i> Hawaii (Achatinella Honolulu Maui	<u>Gastropod</u> Snail, Newcomb's  <i>Erinna newcombi</i> Kauai	Snail, O'ahu Tree  <i>Achatinella decora</i> Honolulu Snail, O'ahu Tree  <i>dimorpha</i> <i>Achatinella</i> Honolulu Snail, O'ahu Tree
Diellia falcata (ncn) (Achatinella  <i>Diellia falcata</i> <i>dimorpha</i> Honolulu Diellia pallida (ncn) (Achatinella  <i>Diellia pallida</i> Kauai Diellia unisora (ncn) (Achatinella  <i>Diellia unisora</i> Honolulu Maui (Achatinella Diplazium molokaiense (ncn) <i>Diplazium molokaiense</i> <i>fuscobasis</i> Maui	Honolulu Snail, O'ahu Tree (Achatinella  <i>Achatinella apexfulva</i> Honolulu Snail, O'ahu Tree (Achatinella <i>Achatinella bellula</i> Honolulu Snail, O'ahu Tree (Achatinella <i>Achatinella buddii</i> Honolulu Snail, O'ahu Tree (Achatinella <i>Achatinella bulimoides</i> Honolulu Snail, O'ahu Tree (Achatinella	<i>elegans</i> Honolulu Snail, O'ahu Tree  <i>Achatinella fulgens</i> Honolulu Snail, O'ahu Tree  <i>fuscobasis</i> <i>Achatinella</i> Honolulu Snail, O'ahu Tree  <i>Achatinella juddii</i> Honolulu Snail, O'ahu Tree  <i>Achatinella juncea</i>
Fern, Pendant Kihi (Adenophorus (Achatinella periens) <i>Adenophorus periens</i> Hawaii (Achatinella Kauai		

Maui		Honolulu
'Ihi'ihī ( <i>Marsilea villosa</i> )	<i>Achatinella byronii</i>	Snail, O'ahu Tree
( <i>Achatinella</i>	Honolulu	
<i>Marsilea villosa</i>		
Honolulu	<i>Achatinella caesia</i>	<i>Iehuiensis</i>
<i>lehuiensis</i>		<i>Achatinella</i>
Maui	Honolulu	Honolulu
Pauoa ( <i>Ctenitis squamigera</i> )	Snail, O'ahu Tree ( <i>Achatinella casta</i> )	Snail, O'ahu Tree
( <i>Achatinella</i>		
<i>Ctenitis squamigera</i>	<i>Achatinella casta</i>	<i>leucorraphe</i>
<i>leucorraphe</i>		<i>Achatinella</i>
Honolulu	Honolulu	Honolulu
Maui		
<b>Gastropod</b>	<b>Gastropod</b>	<b>Monocot</b>
Snail, O'ahu Tree ( <i>Achatinella lila</i> )	Snail, O'ahu Tree ( <i>Achatinella</i>	Kamanomano
( <i>Cenchrus</i>		
<i>Achatinella lila</i>	<i>taeniolata</i> )	<i>agrimonioides</i> )
Honolulu	<i>Achatinella taeniolata</i>	<i>Cenchrus</i>
<i>agrimonioides</i>	Honolulu	Honolulu
Snail, O'ahu Tree ( <i>Achatinella</i>		
<i>Achatinella livida</i>	Snail, O'ahu Tree ( <i>Achatinella</i>	Maui
Honolulu	<i>thaanumi</i> )	
<i>niihauense</i> )	<i>Achatinella thaanumi</i>	Lau'ehu ( <i>Panicum</i>
<i>niihauense</i>	Honolulu	
Snail, O'ahu Tree ( <i>Achatinella</i>		<i>Panicum</i>
<i>Achatinella lorata</i>	Snail, O'ahu Tree ( <i>Achatinella</i>	Kauai
Honolulu	<i>Achatinella turgida</i>	Kauai
	Honolulu	Io`ulu
Snail, O'ahu Tree ( <i>Achatinella</i>		Io`ulu
<i>mustelina</i> )	Snail, O'ahu Tree ( <i>Achatinella</i>	<i>Pritchardia hardyi</i>
<i>Achatinella mustelina</i>		Kauai
<i>affinis</i> )	<i>Achatinella valida</i>	Kauai
Honolulu	Honolulu	
Snail, O'ahu Tree ( <i>Achatinella</i>		Lo`ulu ( <i>Pritchardia</i>
<i>papyruscea</i> )	Snail, O'ahu Tree ( <i>Achatinella</i>	
<i>kaalae</i> )		<i>Pritchardia affinis</i>
<i>Achatinella papyruscea</i>	<i>Achatinella valida</i>	Hawaii
Honolulu	Honolulu	Hawaii
		Lo`ulu ( <i>Pritchardia</i>
Snail, O'ahu Tree ( <i>Achatinella</i>	<b>Mammal</b>	
<i>munroi</i> )	Bat, Hawaiian Hoary	<i>Pritchardia kaalae</i>
<i>phaeozona</i> )	<i>Lasiurus cinereus semotus</i>	<i>Pritchardia kaalae</i>
<i>munroi</i> )	Hawaii	Honolulu
<i>Achatinella phaeozona</i>	Honolulu	Lo`ulu ( <i>Pritchardia</i>
Honolulu		
	Kauai	
	Maui	<i>Pritchardia munroi</i>
<i>napaliensis</i> )		Maui
Snail, O'ahu Tree ( <i>Achatinella</i>		Maui

<i>napaliensis)</i>	<u>Monocot</u>	<i>Pritchardia</i>
<i>pulcherrima)</i>		
<i>napaliensis</i>		
<i>Achatinella pulcherrima</i>	Bluegrass, Hawaiian	Kauai
Honolulu	<i>Poa sandvicensis</i>	Lo`ulu (Pritchardia)
remota)		
Snail, O`ahu Tree ( <i>Achatinella</i>	Kauai	
<i>pupukanioe</i> )		
<i>Achatinella pupukanioe</i>	Bluegrass, Mann's ( <i>Poa mannii</i> )	Pritchardia remota
<i>schattaueri</i> )	<i>Poa mannii</i>	Honolulu
Honolulu		Honolulu
<i>schattaueri</i>	Kauai	Lo`ulu (Pritchardia)
Snail, O`ahu Tree ( <i>Achatinella</i>		
<i>Achatinella rosea</i>	Gahnia Lanaiensis (ncn)	<i>Pritchardia</i>
<i>viscosa</i> )	<i>Gahnia lanaiensis</i>	Hawaii
Honolulu		Lo`ulu (Pritchardia)
Snail, O`ahu Tree ( <i>Achatinella</i>	Maui	
<i>sowerbyana</i> )	Grass, Fosberg's Love	<i>Pritchardia viscosa</i>
<i>Achatinella sowerbyana</i>	Grass, Fosberg's Love	Kauai
(ncn)	<i>Eragrostis fosbergii</i>	Kauai
Honolulu		Mariscus fauriei
Snail, O`ahu Tree ( <i>Achatinella</i>	Honolulu	
<i>spaldingi</i> )	Hala Pepe ( <i>Pleomele hawaiiensis</i> )	<i>Mariscus fauriei</i>
<i>Achatinella spaldingi</i>	<i>Pleomele hawaiiensis</i>	Hawaii
<i>pennatiformis</i> (ncn)		Maui
Honolulu	Hawaii	
<i>pennatiformis</i>	Hilo Ischaemum ( <i>Ischaemum byrone</i> )	<i>Mariscus</i>
Snail, O`ahu Tree ( <i>Achatinella</i>	<i>Ischaemum byrone</i>	Hawaii
<i>Achatinella stewartii</i>		Honolulu
Honolulu	Hawaii	Kauai
Snail, O`ahu Tree ( <i>Achatinella</i>	Kauai	Kauai
<i>Achatinella swiftii</i>	Maui	Maui
Honolulu		
<u>Monocot</u>	<u>Gastropod</u>	<u>Pa`iniu</u>
Kauai		<i>Astelia waialealae</i>
Panicgrass, Carter's ( <i>Panicum fauriei</i>		<u>Bivalve</u>
var. <i>carteri</i> )	Snail, Snake River Physa	Pike
<i>Panicum fauriei</i> var. <i>carteri</i>	<i>Physa natricina</i>	Pope
Honolulu	Elmore	Wabash
Higgins' Eye	Gooding	White
Maui	Owyhee	Pearl mussel,
Platanthera holochila (ncn)		
<i>Platanthera holochila</i>	Twin Falls	<i>Lampsilis higginsii</i>
Kauai	Snail, Utah Valvata	Adams
Maui	<i>Valvata utahensis</i>	Carroll
Daviess	Elmore	Hancock
<i>Poa siphonoglossa</i> (ncn)	Gooding	Jo
<i>Poa siphonoglossa</i>		
Island	Power	Pike
Island	Springsnail, Bruneau Hot	Rock
Kauai		
Orange-footed	<i>Pyrgulopsis bruneauensis</i>	Pearl mussel,
Pu`uka`a ( <i>Cyperus trachysanthos</i> )	Owyhee	<i>Plethobasus</i>

<i>cooperianus</i>			Pope
<i>Cyperus trachysanthos</i>			Pope
Honolulu	<u>Mammal</u>		
Kauai	Bear, Grizzly		Pearlymussel,
White Wartyback	<i>Ursus arctos horribilis</i>		<i>Plethobasus</i>
<i>cicatricosus</i>			
Wahane (Pritchardia aylmer-	Bonner		Clark
<i>Pritchardia aylmer-robinsonii</i>			Gallatin
Kauai	Clearwater		Gallatin
<b>Idaho</b>			<u>Crustacean</u>
Cave	Idaho		<u>Crustacean</u>
<u>Dicot</u>	Shoshone		Amphipod, Illinois
<i>acherondytes</i>	Caribou, Woodland		<i>Gammarus</i>
Catchfly, Spalding's	<i>Rangifer tarandus caribou</i>		Monroe
<i>Silene spaldingii</i>	Bonner		St. Clair
Idaho	Squirrel, Northern Idaho Ground		<u>Dicot</u>
Nez Perce	<i>Spermophilus brunneus brunneus</i>		Aster, Decurrent
False	Adams		
Four-o'clock, Macfarlane's			<i>Boltonia decurrens</i>
<i>Mirabilis macfarlanei</i>			<i>Boltonia decurrens</i>
Idaho	<u>Illinois</u>		Bureau
Howellia, Water	<u>Bivalve</u>		Calhoun
<i>Howellia aquatilis</i>	Fanshell		Fulton
Kootenai	<i>Cyprogenia stegaria</i>		Greene
Latah	Gallatin		Jackson
<b>Gastropod</b>	White		Jersey
Limpet, Banbury Springs			Jersey
<i>Lanx sp.</i>	Mucket, Pink (Pearlymussel)		La Salle
Elmore	<i>Lampsilis abrupta</i>		La Salle
Gooding	Gallatin		Madison
Snail, Bliss Rapids	Hardin		Monroe
Randolph	Pope		Monroe
<i>Taylorconcha serpenticola</i>			Morgan
Randolph	Pearlymussel, Fat Pocketbook		Pike
Elmore	<i>Potamilus capax</i>		Putnam
Gooding	Gallatin		
Twin Falls	Hancock		Scott
Woodford	Lawrence		St. Clair
			Union

<u>Dicot</u>	<u>Mammal</u>	<u>Mammal</u>
Clover, Leafy Prairie Island	Champaign	Rock
<i>Dalea foliosa</i>	Christian	
Sangamon		
Will	Clark	Scott
Williamson	Coles	Shelby
Clover, Prairie Bush	Cook	St. Clair
<i>Lespedeza leptostachya</i>	De Kalb	
Stephenson		
Cook	De Witt	Union
McHenry	Edgar	Wabash
Ogle	Effingham	Warren
Winnebago	Ford	
Washington		
Daisy, Lakeside	Franklin	Wayne
<i>Hymenoxys herbacea</i>	Fulton	
Williamson		
Will	Gallatin	
Winnebago		
Milkweed, Mead's	Greene	
Woodford		
<i>Asclepias meadii</i>	Hamilton	<u>Monocot</u>
Ford	Hancock	Orchid, Eastern
Prairie Fringed		
Will	Hardin	<i>Platanthera</i>
<i>leucophaea</i>		
Potato-bean, Price's	Jackson	Cook
<i>Apios priceana</i>	Jasper	Kane
Union	Jefferson	Lake
Thistle, Pitcher's	Jersey	McHenry
<i>Cirsium pitcheri</i>	Jo Daviess	
Whorled		Pogonia, Small
Lake	Johnson	
<u>Gastropod</u>	Kane	<i>Isotria medeoloides</i>
Randolph		
Snail, Iowa Pleistocene	Kendall	
<i>Discus macclintocki</i>	La Salle	<u>Indiana</u>
Jo Daviess	Lake	
<u>Mammal</u>	Lawrence	<u>Bivalve</u>
<i>stegaria</i>	Macon	Fanshell
Bat, Gray	Macoupin	<i>Cyprogenia</i>
<i>Myotis grisescens</i>		
Hardin	Madison	Carroll
Johnson	Marion	Daviess
Lawrence	Menard	Knox
Madison	Monroe	Martin
Pike	Morgan	Posey
Pope	Moultrie	Sullivan
Bat, Indiana	Ogle	

Tippecanoe <i>Myotis sodalis</i>	Perry Piatt	Vigo Mucket, Pink
Adams (Pearlymussel) Bond (Pearlymussel)	Pike	Mucket, Pink
Boone Bureau Crawford Calhoun Dearborn Carroll	Pope Putnam	<i>Lampsilis abrupta</i> Clark
<b>Bivalve</b>	<b>Bivalve</b>	<b>Mammal</b>
Harrison Bartholomew Jefferson Perry Posey Spencer Switzerland Warrick Crawford	Tippecanoe Vigo Pearlymussel, White Cat's Paw <i>Epioblasma obliquata perobliqua</i> Allen De Kalb Pearlymussel, White Wartyback	Boone Brown Carroll Clark Clinton
Mussel, Clubshell <i>Pleurobema clava</i> Carroll Dearborn De Kalb Delaware Fulton Kosciusko Tippecanoe	<i>Plethobasus cicatricosus</i> Posey Tippecanoe Vigo Riffleshell, Northern <i>Epioblasma torulosa rangiana</i> De Kalb	Daviess De Kalb Floyd Franklin Fulton Hamilton Harrison
Mussel, Ring Pink (=Golf Stick <i>Obovaria retusa</i>	<b>Dicot</b>	
Harrison Hendricks Knox Posey Jefferson Sullivan Tippecanoe	Clover, Running Buffalo <i>Trifolium stoloniferum</i> Dearborn Ripley Switzerland	Jay
Vigo Mussel, Rough Pigtoe Kosciusko <i>Pleurobema plenum</i>	Goldenrod, Short's <i>Solidago shortii</i> Harrison	Jennings Johnson Knox La Porte
Carroll Lagrange Knox Martin Lawrence	Milkweed, Mead's <i>Asclepias meadii</i> Lake	Lake
	Thistle, Pitcher's	

Sullivan	<i>Cirsium pitcheri</i>	Madison
Tippecanoe	Lake	Marion
Vigo	Porter	Martin
Pearlymussel, Fat Pocketbook	<u>Mammal</u>	Miami
<i>Potamilus capax</i>		Monroe
Carroll	Bat, Gray	Morgan
Knox	<i>Myotis grisescens</i>	Orange
Posey	Clark	Owen
Tippecanoe	Floyd	Owen
Pearlymussel, Tuberclad-blossom	Harrison	Parke
<i>Epioblasma torulosa torulosa</i>	Jennings	Parke
Carroll	Perry	Perry
Fulton	Spencer	Perry
Knox	Bat, Indiana	Porter
Randolph	<i>Myotis sodalis</i>	Posey
Kosciusko	Adams	Posey
Posey	Allen	Putnam
Sullivan	<u>Dicot</u>	Putnam
<u>Mammal</u>		Ripley
Starke	Decatur	Scott
Steuben	Dubuque	Scott
Northern Wild	Fayette	Spencer
Sullivan	Floyd	Spencer
<i>noveboracense</i>	Grundy	
Switzerland	Hardin	Clayton
Allamakee	Ida	
Tippecanoe	Iowa	
Vigo	Jackson	Hardin
Dubuque	Jasper	Jackson
Warrick	Jefferson	
Washington	Johnson	
Wayne	Jones	
Wells	Keokuk	
Pleistocene	Lee	
<b>Iowa</b>	Lucas	
	Madison	
<u>Bivalve</u>	<u>Gastropod</u>	
Pearlymussel, Fat Pocketbook	<i>Discus macclintocki</i>	
Dubuque	Clayton	
<i>Potamilus capax</i>	Clayton	
Johnson	Clinton	
Pearlymussel, Higgins' Eye		
Winneshiek		
<i>Lampsilis higginsii</i>		
Allamakee	Keokuk	
	Lee	
	Lucas	
	Madison	
	Mahaska	
	Marion	
	<u>Mammal</u>	

	Clayton	Marshall	Bat, Indiana <i>Myotis sodalis</i>
	Clinton	Mitchell	
	Dubuque	Monona	Adair
	Jackson	Muscatine	
	Appanoose		
	Lee	Palo Alto	Cedar
	Muscatine	Polk	Decatur
	Scott	Pottawattamie	
	Dubuque		
<u>Dicot</u>		Ringgold	Iowa
		Scott	Jasper
	Clover, Prairie Bush		Jefferso
n			
	<i>Lespedeza leptostachya</i>	Shelby	Johnson
	Adair	Story	Keokuk
	Allamakee	Van Buren	Lee
	Appanoose	Wapello	Lucas
	Audubon	Warren	Madison
	Benton	Washington	Mahask
a	Black Hawk	Wayne	Marion
	Boone	Winneshiek	Muscatin
e	Bremer	Milkweed, Mead's	Polk
	Butler	<i>Asclepias meadii</i>	Pottawat
tamie	Cedar	Adair	Ringgold
	Chickasaw	Decatur	Scott
	Clay	Lucas	Van
Buren	Clayton	Madison	Wapello
	Clinton	Ringgold	Warren
	Crawford	Warren	Washing
ton			

<u>Mammal</u>	<u>Monocot</u>	<u>Mammal</u>
Wayne	Iowa	Bat, Gray
<u>Monocot</u>	Jackson	<i>Myotis grisescens</i>
Orchid, Eastern Prairie Fringed	Jasper	Bourbon
<i>Platanthera leucophaea</i>	Jefferson	
Cherokee		
Appanoose	Johnson	
Crawford		
Cedar	Keokuk	Labette
Decatur	Lee	Ferret, Black-footed
Iowa	Linn	<i>Mustela nigripes</i>
Jackson	Lucas	Finney
Jefferson	Madison	Lane
Johnson	Mahaska	
Sedgwick		
Jones	Marion	
Sherman		
Keokuk	Marshall	Trego
Lee	Mitchell	Wichita
Lucas	Muscatine	<u>Monocot</u>
Muscatine	Palo Alto	
		Orchid, Western
Prairie Fringed	Plymouth	<i>Platanthera</i>
Scott		
<i>praeclara</i>		
Van Buren	Polk	
Anderson		
Wapello	Pottawattamie	Atchison
Washington	Ringgold	
Crawford		
Wayne	Scott	Douglas
	Shelby	Jackson
		Jackson
Orchid, Western Prairie Fringed		
<i>Platanthera praeclara</i>		
Jefferson	Story	
Adair	Van Buren	Johnson
Appanoose	Wapello	
Leavenworth		
Audubon	Warren	Osage
Benton	Washington	
Pottawatomie		
Black Hawk	Wayne	
Shawnee		
Boone		
Bremer		
<b>Kansas</b>		<b>Kentucky</b>
<u>Dicot</u>		<u>Bivalve</u>
Butler		<u>Bivalve</u>
Cedar	Milkweed, Mead's	
	<i>Asclepias meadii</i>	
<i>stegaria</i>		Fanshell
Chickasaw		<i>Cyprogenia</i>
<i>stegaria</i>		
Clay	Anderson	<i>Cyprogenia</i>
	Bourbon	Allen
		Allen
		Barren

Clayton	Crawford	Barren
Clinton	Douglas	Bath
Crawford	Jefferson	Bath
Decatur	Johnson	Boyle
Dubuque	Leavenworth	Boyle
	Campbell	Bracken
Fayette		Bracken
Campbell		Butler
Floyd	Miami	Butler
		Carter
Grundy	Neosho	Carter
Cumberland	Cumberland	
Hardin		Fleming
Ida		Greenup
<b>Bivalve</b>	<b>Mammal</b>	
Hart	<b>Bivalve</b>	
Cumberland	Allen	
Henderson	Bath	
Henry	Boyle	
McCreary	Bracken	
Jefferson	Bullitt	
Kenton	Butler	
Larue		Pulaski
(=Golf Stick)		
Lawrence	Campbell	Wayne
Livingston	Cumberland	Mussel, Ring Pink
Mason	Gallatin	
Mercer	Grayson	
Nelson	Harrison	
Campbell		
Nicholas	Hart	Obovaria retusa
Owen	Jefferson	Ballard
Cumberland		
Pendleton	Kenton	Boone
Spencer	Livingston	Butler
Todd	Marshall	
Henderson		
Warren	Mason	Carroll
Jefferson		
Wayne	McCreary	
Woodford	Mercer	
Livingston		
Mucket, Pink (Pearlymussel)	Nelson	Greenup
<i>Lampsilis abrupta</i>	Owen	Hart
Ballard	Pendleton	
McCracken		
Bath	Pulaski	

	Boone	Robertson	Pulaski
	Butler	Spencer	Todd
	Campbell	Taylor	Trigg
	Carroll	Warren	Warren
	Cumberland	Woodford	Wayne
	Greenup	Mussel, Cumberland Combshell	
	Woodford		
	Hart	<i>Epioblasma brevidens</i>	Mussel, Rough
Pigtoe	Henderson	Cumberland	<i>Pleurobema</i>
	Jefferson	Hart	Butler
	Kenton	Laurel	
	Campbell		
	Livingston	McCreary	
	Cumberland		
	Marshall	Pulaski	Greenup
	Mason	Rockcastle	Hart
	McCracken	Wayne	Kenton
	Pendleton	Mussel, Cumberland Elktoe	
	Livingston		
	Pulaski	<i>Alasmidonta atropurpurea</i>	Marshall
	Spencer	Laurel	Mercer
	Warren	McCreary	
	Pendleton	Rockcastle	Pulaski
	Wayne	Mussel, Oyster	Taylor
Mussel, Clubshell		<i>Epioblasma capsaeformis</i>	Warren
<i>Pleurobema clava</i>		<b>Bivalve</b>	<b>Bivalve</b>
<b>Bivalve</b>	Wayne	Butler	Pearlymussel,
Purple Cat's Paw		Crittenden	<i>Epioblasma</i>
	Woodford		
<i>obliquata obliquata</i>			
Mussel, Winged Mapleleaf		Greenup	Butler
<i>Quadrula fragosa</i>		Hart	
Cumberland		Henderson	Hart
	Kenton	Jefferson	
	Oldham		
	Henderson		
	Pendleton	Livingston	Kenton
	Trigg	Marshall	Pulaski
Pearlymussel, Appalachian		Mason	Warren
Monkeyface		McCracken	Pearlymussel,
Tubercled-blossom		Taylor	<i>Epioblasma</i>
<i>Quadrula sparsa</i>		Warren	
<i>torulosa torulosa</i>			
Cumberland		Pearlymussel, Little-wing	Greenup
	Campbell	<i>Pegias fabula</i>	Greenup
	Pulaski	Jackson	Hart
Pearlymussel, Cracking			
<i>Hemistena lata</i>		Laurel	Kenton
Henderson		Logan	Mason
	Carroll		
	Cumberland		

Hart	Mason	
McCracken	McCreary	Nelson
Jefferson	Pulaski	
Kenton		
Pendleton	Rockcastle	Taylor
Mason	Todd	Warren
McCreary	Wayne	Pearlymussel, <i>Plethobasus</i>
Pulaski		
White Wartyback	Pearlymussel, Orange-footed	<i>Plethobasus</i>
Wayne		
<i>cicatricosus</i>		
Pearlymussel, Cumberland Bean	<i>Plethobasus cooperianus</i>	
Campbell		
<i>Villosa trabalis</i>	Ballard	Carroll
Cumberland	Bullitt	Gallatin
Jackson	Butler	
Henderson		
Laurel	Campbell	Kenton
Lincoln	Carroll	
Livingston		
Mason	Crittenden	Marshall
McCreary	Cumberland	Todd
Pulaski	Grayson	Pearlymussel, <i>Epioblasma</i>
Yellow-blossom	Hancock	
Rockcastle		
<i>florentina florentina</i>	Jefferson	
Wayne		
Cumberland		
Pearlymussel, Dromedary	Kenton	Pulaski
<i>Dromus dromas</i>	Livingston	Todd
Cumberland	Marshall	Riffleshell, Northern <i>Epioblasma</i>
Mason	Mason	
<i>torulosa rangiana</i>	McCracken	Bath
McCreary	Trigg	Franklin
Pulaski	Trimble	Grayson
Wayne	Warren	Hart
Pearlymussel, Fat Pocketbook	Wayne	Kenton
<i>Potamilus capax</i>		

<u>Bivalve</u>	<u>Dicot</u>	<u>Mammal</u>
Mercer	Fleming	Allen
Nelson	Jefferson	Barren
Pendleton	Mason	
Breckinridge		
Rowan	Nicholas	Bullitt
Spencer	Robertson	Caldwell
Taylor	Goldenrod, White-haired	
Calloway		
Warren	<i>Solidago albopilosa</i>	Carter
Woodford	Menifee	Christian
Rifleshell, Tan	Potato-bean, Price's	Clark
<i>Epioblasma florentina walkeri</i> (=E. Crittenden <i>walkeri</i> )	<i>Apios priceana</i>	
Cumberland	Calloway	Fayette
Laurel	Livingston	Franklin
Logan	Nelson	Garrard
McCreary	Trigg	Graves
Pulaski	Warren	Grayson
Simpson	Rock-cress, Large (=Braun's)	Greenup
Wayne	<i>Arabis perstellata</i> E. L. Braun var. <i>ampla</i> Rollins	Greenup
<u>Crustacean</u>	Franklin	Hardin
Shrimp, Kentucky Cave	Henry	Hart
Jefferson	Owen	Hopkins
<i>Palaemonias ganteri</i>		
Jessamine	Rock-cress, Small	Larue
Barren	<i>Arabis perstellata</i> E. L. Braun var. <i>perstellata</i> Fernald	Lee
Hart	Franklin	
<u>Dicot</u>		
Livingston	Henry	Logan
Chaffseed, American	Owen	Menifee
<i>Schwalbe americana</i>		Metcalfe
McCreary	Rosemary, Cumberland	Nelson
Clover, Running Buffalo	<i>Conradina verticillata</i>	Nelson
<i>Trifolium stoloniferum</i>	Mason	Pulaski
Boone	McCreary	Simpson
Bourbon		Taylor
Clark	Sandwort, Cumberland	Todd
Estill	<i>Arenaria cumberlandensis</i>	Todd
Fayette	Mason	Trigg
Harrison	McCreary	Warren
Jefferson	Spiraea, Virginia	Wayne
Jessamine	<i>Spiraea virginiana</i>	
Kenton	Laurel	Bat, Indiana
Madison	Pulaski	<i>Myotis sodalis</i>
Montgomery	Rockcastle	Adair
Anderson		Allen
	<u>Mammal</u>	Ballard

Nelson		Ballard
Woodford		Barren
Goldenrod, Short's	Bat, Gray	Bath
<i>Solidago shortii</i>	<i>Myotis grisescens</i>	Bath
<b>Mammal</b>	<b>Adair</b>	Bell
Boone	Mammal	<b>Mammal</b>
Bourbon	Laurel	Lee
Boyle	Lawrence	Menifee
Bracken	Lee	Morgan
Rockcastle	Leslie	
Breckinridge	Lincoln	Rowan
Bullitt	Livingston	<b>Louisiana</b>
Butler	Logan	
Caldwell	Madison	<b>Bivalve</b>
Inflated	Marshall	Mussel, Heelsplitter
Calloway		
Campbell	Mason	<i>Potamilus inflatus</i>
Carroll	McCracken	
Ascension		
Carter	McCreary	Pearlshell,
Louisiana		
<i>hembelii</i>	Menifee	<i>Margaritifera</i>
Christian	Mercer	Rapides
Clark	Metcalfe	<b>Dicot</b>
Clay	Montgomery	Chaffseed,
American		
<i>americana</i>	Morgan	<i>Schwalbea</i>
Crittenden		
Cumberland	Nelson	Allen
Daviess	Nicholas	<b>Ferns</b>
Elliott	Oldham	
Estill	Owen	Quillwort, Louisiana
<i>louisianensis</i>		<i>Isoetes</i>
Fayette	Owsley	St.
Tammany		
Fleming	Pendleton	
Washington		<b>Mammal</b>
Floyd	Pulaski	
Franklin	Robertson	Bear, Louisiana
Fulton	Rockcastle	
Black		<i>Ursus americanus</i>
<i>luteolus</i>		
Gallatin	Rowan	Avoyelle
s		
Garrard	Scott	Concordi
a		
Grant	Shelby	Franklin

	Graves	Simpson	Iberia
	Grayson	Spencer	St.
Landry	Greenup	Taylor	St.
Martin	Hancock	Todd	St. Mary
	Hardin	Trigg	St.
Tammany	Harrison	Trimble	Vermilio
n	Hart	Warren	Washing
ton	Henderson	Washington	West
Carroll	Henry	Wayne	<b>Maine</b>
	Hopkins	Woodford	
	Jackson	Bat, Virginia Big-eared	<u>Dicot</u>
	Jefferson	<i>Corynorhinus</i> (= <i>Plecotus</i> )	
	Jessamine	<i>townsendii virginianus</i>	Lousewort, Furbish
	Kenton	Estill	<i>Pedicularis</i>
<i>furbishiae</i>	Larue	Jackson	
	Aroostook		

### Mammal

Lynx, Canada  
*Lynx canadensis*  
 Aroostook  
*torulosa rangiana*  
 Piscataquis

### Monocot

Orchid, Eastern Prairie Fringed  
*Platanthera leucophaea*  
 Aroostook  
 Houghton's

Pogonia, Small Whorled  
*Isotria medeoloides*  
 Charlevoix  
 Cumberland  
 Cheboygan  
 Kennebec  
 Oxford  
 York

Isle

### Mammal

Squirrel, Delmarva Peninsula Fox  
*Sciurus niger cinereus*  
 Cecil

Dorchester

Kent  
 Prince Georges

Talbot  
 Wicomico

Worcester

### Monocot

Bulrush, Northeastern (=Barbed)  
*Scirpus ancistrochaetus*  
 Washington  
 Pink, Swamp

### Mammal

### Bivalve

Hillsdale  
 Riffleshell, Northern  
*Epioblasma*

Monroe

Sanilac  
 Wayne

### Dicot

Goldenrod,  
*Solidago houghtonii*  
*Solidago houghtonii*

Delta  
 Emmet  
 Presque

<b>Maryland</b>	<i>Helonias bullata</i>	
Schoolcraft		
Michigan		
<b>Bivalve</b>		
<i>var. michiganensis</i>		
Mussel, Dwarf Wedge	Anne Arundel	Monkey-flower,
<i>Alasmidonta heterodon</i>	Cecil	<i>Mimulus glabratus</i>
Charlevoix	Dorchester	Benzie
Caroline		
Cheboygan		
Charles		
Prince Georges	<b>Dicot</b>	Emmet
Leelanau	Gerardia, Sandplain	
Talbot		
<b>Dicot</b>		
Dropwort, Canby's	<i>Agalinis acuta</i>	Thistle, Pitcher's
<i>Oxypolis canbyi</i>	Barnstable	<i>Cirsium pitcheri</i>
Prince Georges	Dukes	Alcona
Gerardia, Sandplain	<b>Mammal</b>	Allegan
<i>Agalinis acuta</i>	Bat, Indiana	Alpena
Baltimore	<i>Myotis sodalis</i>	Antrim
Harperella	Berkshire	Arenac
<i>Ptilimnium nodosum</i>		Benzie
Charlevoix	<b>Monocot</b>	Berrien
Allegany	Bulrush, Northeastern (=Barbed	
Cheboygan	<i>Scirpus ancistrochaetus</i>	
Washington		
<b>Mammal</b>	Franklin	
Bat, Indiana	Pogonia, Small Whorled	Delta
Traverse	<i>Isotria medeoloides</i>	Emmet
<i>Myotis sodalis</i>	Essex	Grand
Allegany		
Frederick	Hampden	Huron
Leelanau	Hampshire	Iosco
Garrett	Worcester	
Harford		
Muskegon	<b>Michigan</b>	Mason
Howard		
Montgomery	<b>Bivalve</b>	Oceana
Washington	Mussel, Clubshell	Ottawa
Isle	<i>Pleurobema clava</i>	Presque

<u>Dicot</u>	<u>Mammal</u>	<u>Bivalve</u>
Schoolcraft	Wayne	Mussel, Winged
Mapleleaf	Lynx, Canada	<i>Quadrula fragosa</i>
Van Buren	<i>Lynx canadensis</i>	Chisago
<u>Mammal</u>	Baraga	
Bat, Indiana		
Washington		
<i>Myotis sodalis</i>	Delta	Pearlymussel,
Higgins' Eye		
Allegan	Houghton	<i>Lampsilis higginsii</i>
Barry	Marquette	Chisago
Bay	Menominee	Dakota
Benzie		
Goodhue	Schoolcraft	
Berrien		
Hennepin		
Branch		Houston
Calhoun	Iris, Dwarf Lake	
Wabasha	<i>Iris lacustris</i>	
Cass		
Washington	Alpena	
Clinton	Charlevoix	Winona
Eaton	Cheboygan	
Genesee	Delta	Clover, Prairie
Bush		
Gratiot	Emmet	<i>Lespedeza</i>
<i>leptostachya</i>		
Hillsdale	Menominee	Brown
Huron	Presque Isle	
Cottonwood		
Ingham	Schoolcraft	Crow
Wing		
Ionia	Orchid, Eastern Prairie Fringed	Dakota
Jackson	<i>Platanthera leucophaea</i>	Dodge
Kalamazoo	Bay	
Goodhue		
Kent	Cheboygan	Houston
Lapeer	Clinton	Mower
Leelanau	Eaton	Olmsted
Lenawee	Genesee	
Redwood		
Livingston	Gratiot	Renville
Macomb	Huron	Rice
Mason	Livingston	Roseroot, Leedy's
Monroe	Monroe	<i>Sedum</i>
<i>integrifolium ssp. leedyi</i>		
Montcalm	Saginaw	Fillmore
Muskegon	St. Clair	Olmsted
Oakland	St. Joseph	
Oceana	Tuscola	<u>Mammal</u>
Ottawa	Washtenaw	Lynx, Canada
Saginaw	Wayne	<i>Lynx canadensis</i>
Sanilac	Pogonia, Small Whorled	Aitkin
Shiawassee	<i>Isotria medeoloides</i>	Beltrami
		Cass

St. Clair	Berrien	Marshall
St. Joseph		Roseau
Tuscola		St. Louis
Van Buren		St. Louis
	<b>Minnesota</b>	
Washtenaw		<u>Monocot</u>
<b>Monocot</b>		
Lily, Minnesota Trout		<b>Mammal</b>
<i>Erythronium propullans</i>		Jasper
Jefferson Davis		
Dakota	Clay	Jones
Goodhue	Itawamba	
Lauderdale		
Rice	<b>Dicot</b>	
Lawrence		
Orchid, Western Prairie Fringed	Pondberry	Leake
<i>Platanthera praeculta</i>	<i>Lindera melissifolia</i>	Madison
Clay	Bolivar	Marion
Dodge	Tallahatchie	Neshoba
Faribault	Potato-bean, Price's	Newton
Fillmore	<i>Apios priceana</i>	Pearl
River	Clay	Perry
Freeborn	Kemper	Pike
Kandiyohi	Lee	Rankin
Kittson		
Lincoln	<b>Ferns</b>	Scott
Mower		Smith
Nobles	Quillwort, Louisiana	Stone
	<i>Isoetes louisianensis</i>	
Norman	George	
Wilkinson	Harrison	Yazoo
Pennington	Jackson	<b>Missouri</b>
Polk		<b>Missouri</b>
Red Lake	Jones	
	Pearl River	<u>Bivalve</u>
<b>Mississippi</b>		Mucket, Pink
(Pearlymussel)		
<b>Bivalve</b>	Perry	<i>Lampsilis abrupta</i>
	Stone	Cedar
Combshell, Southern (=Penitent		Cedar
mussel)		
<i>Epioblasma penita</i>	<b>Mammal</b>	Cole
Itawamba	Bat, Gray	Franklin
Gasconade	<i>Myotis grisescens</i>	
Mucket, Orangenacre	Perry	
Jefferson		
<i>Lampsilis perovalis</i>	Tishomingo	Maries
Itawamba	Bat, Indiana	Miller
Mussel, Black (=Curtus' Mussel)	<i>Myotis sodalis</i>	Osage

<u>Clubshell</u>		
<i>Pleurobema curtum</i>	Tishomingo	St. Clair
Itawamba		
Mussel, Heavy Pigtoe (=Judge Tait's Mussel)	Bear, Louisiana Black	St. Louis
<i>Pleurobema taitianum</i>	<i>Ursus americanus luteolus</i>	Wayne
Itawamba	Attala	Mussel, Scaleshell
Crawford	Attala	Mussel, Scaleshell
	Clarke	<i>Leptodea leptodon</i>
	Copiah	
Mussel, Heelsplitter inflated	Covington	Franklin
<i>Potamilus inflatus</i>		Franklin
Gasconade	Franklin	
Pearl River	George	
Jefferson	Harrison	La clede
Mussel, Ovate Clubshell		La clede
<i>Pleurobema perovatum</i>	Hinds	Maries
Itawamba	Jackson	Osage
<u>Bivalve</u>	<u>Dicot</u>	<u>Mammal</u>
St. Louis	Howard	Christian
Wright	La clede	Cole
Mussel, Winged Mapleleaf	Madison	
Crawford		
<i>Quadrula fragosa</i>	Maries	Dade
Franklin	Moniteau	Dallas
Pearlymussel, Curtis'	Ozark	Dent
<i>Epioblasma florentina curtisi</i>	Phelps	Douglas
Bollinger	St. Charles	Franklin
Wayne	St. Louis	Greene
Pearlymussel, Fat Pocketbook	Taney	Hickory
<i>Potamilus capax</i>	Texas	Iron
Marion	Vernon	Jasper
Pearlymussel, Higgins' Eye	Wayne	
Jefferson		
<i>Lampsilis higginsii</i>	Fruit, Earth (=geocarpon)	La clede
Marion	<i>Geocarpon minimum</i>	
Lawrence		
<u>Crustacean</u>		
Crayfish, Cave ( <i>Cambarus</i>	Cedar	Maries
<i>Cambarus aculabrum</i>	Dade	Marion
Benton		
<u>Dicot</u>		
Aster, Decurrent False	Greene	Miller
<i>Boltonia decurrens</i>	Lawrence	Morgan
Franklin	St. Clair	Newton
Howell	Milkweed, Mead's	Oregon
	<i>Asclepias meadii</i>	Osage
	Benton	Ozark
	Cass	Phelps
	Cedar	
	Reynolds	

St. Charles	Dade Iron	St. Clair St. Louis
Bladderpod, Missouri <i>Lesquerella filiformis</i>	Reynolds	Stone Taney
Christian	St. Clair	Taney
Dade	Vernon	Texas Texas
Greene Lawrence	Sneezeweed, Virginia <i>Helenium virginicum</i>	Wright Wright
Clover, Running Buffalo <i>Trifolium stoloniferum</i>	Howell	Bat, Indiana <i>Myotis sodalis</i>
	<b>Gastropod</b>	Barry Boone
Barry Benton Boone Buchanan Callaway Carter Callaway	Cavesnail, Tumbling Creek <i>Antrobia culveri</i>	
	Taney	Caldwell
	<b>Mammal</b>	
Cedar Christian	Bat, Gray <i>Myotis grisescens</i>	Chariton Christian
Cole	Barry	Clay
Crawford	Benton	Clinton
Dade	Boone	Cooper
		Crawfor
d		
Dent	Carter	
<b>Mammal</b>	<b>Mammal</b>	<b>Dicot</b>
Daviess De Kalb	Lake Missoula	Nye Gumplant, Ash
Meadows	Sanders	<i>Grindelia fraxino-</i>
Franklin <i>pratensis</i>	Stillwater Yellowstone	Nye Ivesia, Ash
Grundy Howard	Ferret, Black-footed	<i>Ivesia kingii</i> var.
Meadows		
Iron	<i>Mustela nigripes</i>	Nye
<i>eremica</i>	Big Horn	Milk-vetch, Ash
Jefferson La clede	Custer	<i>Astragalus phoenix</i>
Meadows	Rosebud	Nye
Marion Mercer Monroe	Treasure	Niterwort,
Amargosa		
Montgomery		<i>Nitrophila</i>
<i>mohavensis</i>		
Oregon		Nye

## Nebraska

Phelps	<u>Dicot</u>	
Meadows		Sunray, Ash
Platte	Butterfly Plant, Colorado	<i>Enceliopsis</i>
<i>nudicaulis var. corrugata</i>		
Randolph	<i>Gaura neomexicana var.</i>	Nye
Ray	Kimball	
<b>Hampshire</b>		<b>New</b>
Schuyler	Penstemon, Blowout	
St. Charles	<i>Penstemon haydenii</i>	<u>Bivalve</u>
St. Francois	Box Butte	Mussel, Dwarf
Wedge		
St. Louis	Garden	<i>Alasmidonta</i>
<i>heterodon</i>		
Stone	Morrill	Cheshire
Taney	Sheridan	Coos
Texas	<u>Mammal</u>	<u>Mammal</u>
Warren	Ferret, Black-footed	Bat, Indiana
Wright	<i>Mustela nigripes</i>	<i>Myotis sodalis</i>
<b>Montana</b>	Box Butte	
Hillsborough		
<u>Dicot</u>		<u>Monocot</u>
Merrimack	Buffalo	
	Merrimack	Pogonia, Small
Catchfly, Spalding's	Scotts Bluff	
<i>Silene spaldingii</i>		<i>Isotria medeoloides</i>
Whorled	Sheridan	Belknap
	Sioux	Belknap
Flathead	<u>Monocot</u>	Carroll
Lake		
Sanders	Orchid, Western Prairie Fringed	
	<i>Platanthera praecox</i>	
Howellia, Water	Hillsborough	
Merrimack	Lancaster	
<i>Howellia aquatilis</i>		
Merrimack		
Lake	Seward	
Missoula	Rockingham	
<u>Mammal</u>		
Bear, Grizzly	<b>Nevada</b>	Strafford
<i>Ursus arctos horribilis</i>		
American	<u>Dicot</u>	<b>New Jersey</b>
Carbon	Blazing Star, Ash Meadows	<u>Dicot</u>
<i>americana</i>	<i>Mentzelia leucophylla</i>	Chaffseed,
Flathead	Nye	<i>Schwalbea</i>
Burlington		
Glacier	Centaury, Spring-loving	
	<i>Centaurium nemophilum</i>	

<u>Dicot</u>	<u>Crustacean</u>	<u>Gastropod</u>
Joint-vetch, Sensitive <i>Aeschynomene virginica</i>	Socorro	Socorro
Burlington (=Sanborn's) Long-nosed Cumberland <i>curasoae yerbabuenae</i>	<u>Dicot</u> Cactus, Knowlton <i>Pediocactus knowltonii</i>	<u>Mammal</u> Bat, Lesser <i>Leptonycteris</i>
<u>Mammal</u>	San Juan	Hidalgo
Bat, Indiana nosed <i>Myotis sodalis</i> <i>nivalis</i>	Cactus, Kuenzler Hedgehog <i>Echinocereus fendleri</i> var. <i>kuenzleri</i>	Bat, Mexican Long- <i>Leptonycteris</i>
Bergen Hunterdon Mercer Middlesex Bernalillo Morris Passaic Somerset Sussex	Lincoln Otero Cactus, Mesa Verde <i>Sclerocactus mesae-verdae</i>	Hidalgo Ferret, Black-footed <i>Mustela nigripes</i>
Ana	San Juan	Catron
Warren	Cactus, Sneed Pincushion <i>Coryphantha sneedii</i> var. <i>sneedii</i>	Curry
<u>Monocot</u>	Dona Ana	De Baca
Beaked-rush, Knieskern's <i>Rhynchospora knieskernii</i>	Fleabane, Zuni <i>Erigeron rhizomatus</i>	Dona
Atlantic Burlington Camden	Catron Ipomopsis, Holy Ghost <i>Ipomopsis sancti-spiritus</i>	Grant
Arriba	San Miguel	Hidalgo
Monmouth	Milk-vetch, Mancos <i>Astragalus humillimus</i>	Lincoln
Juan	San Juan	Luna
Ocean		Otero
Miguel		Quay
Pink, Swamp Sandoval	Pennyroyal, Todsen's <i>Hedeoma todsonii</i>	Rio
<i>Helonias bullata</i>	Otero	San
Fe	Sierra	San
Atlantic Burlington Camden Cape May	Sierra Poppy, Sacramento Prickly <i>Argemone pleiacantha</i> ssp. <i>pinnatisecta</i>	Valencia
Cumberland Gloucester	Otero	Jaguar
Middlesex Monmouth	Sunflower, Pecos <i>Helianthus paradoxus</i>	<i>Panthera onca</i>
Morris	Valencia	<i>Panthera onca</i>
Ocean	Thistle, Sacramento Mountains	Hidalgo
Wedge	<i>Cirsium vinaceum</i>	<b>New York</b>
<i>heterodon</i> Pogonia, Small Whorled		<u>Bivalve</u>
		Mussel, Dwarf
		<i>Alasmidonta</i>

<i>Isotria medeoloides</i>	Otero	Orange
Sussex		<u>Dicot</u>
<b>New Mexico</b>	<u>Gastropod</u>	
Seabeach	Springsnail, Alamosa	Amaranth,
<i>pumilus</i>	<i>Tryonia alamosae</i>	<i>Amaranthus</i>
<u>Crustacean</u>	Socorro	Nassau
Isopod, Socorro	Springsnail, Socorro	Suffolk
<i>Thermosphaeroma thermophilus</i>	<i>Pyrgulopsis neomexicana</i>	
<u>Dicot</u>	<u>Mammal</u>	<u>Bivalve</u>
Gerardia, Sandplain	Niagara	Granville
<i>Agalinis acuta</i>	Oneida	Halifax
Nassau	Onondaga	
Johnston		
Suffolk	Ontario	Nash
Monkshood, Northern Wild	Orange	Orange
<i>Aconitum noveboracense</i>	Orleans	Person
Delaware	Oswego	Vance
Sullivan	Otsego	Wake
Ulster	Rensselaer	Warren
Roseroot, Leedy's	Richmond	Wilson
<i>Sedum integrifolium</i> ssp. <i>leedyi</i>	Rockland	Mussel, Heelsplitter
Carolina	Schoharie	<i>Lasmigona</i>
Cayuga		
<i>decorata</i>	Schuyler	Anson
Schuyler	Seneca	
Yates		
Cabarrus		
<u>Ferns</u>	St. Lawrence	
Mecklenburg	Steuben	
Fern, American hart's-tongue	Richmond	
<i>Asplenium scolopendrium</i> var.		
<i>americanum</i>	Sullivan	Union
Madison	Tompkins	Mussel, Oyster
<i>capsaeformis</i>	Ulster	<i>Epioblasma</i>
Onondaga	Washington	
Buncombe		
<u>Gastropod</u>	Wayne	
Henderson		
Snail, Chittenango Ovate Amber	Westchester	Madison
<i>Succinea chittenangoensis</i>	Wyoming	Pearlymussel,
Little-wing	Yates	<i>Pegias fabula</i>
Madison		
<u>Mammal</u>	<u>Monocot</u>	Macon
Bat, Indiana	Pogonia, Small Whorled	Swain
<i>Myotis sodalis</i>	<i>Isotria medeoloides</i>	Spiny mussel,
James River		
Albany	Onondaga	<i>Pleurobema collina</i>
Broome		
Rockingham		
Cattaraugus		Spiny mussel, Tar

River		<u>Bivalve</u>	
<i>steinstansana</i>			<i>Elliptio</i>
Cayuga			<i>Elliptio</i>
<i>steinstansana</i>			
Chautauqua		Elktoe, Appalachian	
Edgecombe		<i>Alasmidonta raveneliana</i>	
Chenango			Franklin
Columbia		Buncombe	Franklin
Cortland		Graham	Halifax
Johnston			
Delaware		Haywood	Nash
Dutchess		Henderson	Warren
Erie		Jackson	<u>Dicot</u>
Essex		Macon	Amaranth,
Seabeach			
<i>pumilus</i>	Genesee	Swain	<i>Amaranthus</i>
Greene		Yancey	
Brunswick			
Livingston		Mussel, Dwarf Wedge <i>Alasmidonta heterodon</i>	Carteret
Madison			Currituck
Monroe		Franklin	Currituck
Hanover			New
<u>Dicot</u>		<u>Dicot</u>	<u>Dicot</u>
Onslow		Harperella	Pitcher-plant,
Mountain Sweet			
Pender		<i>Ptilimnium nodosum</i>	<i>Sarracenia rubra</i>
<i>ssp. jonesii</i>			
Avens, Spreading		Chatham	
Buncombe			
<i>Geum radiatum</i>		Granville	
Henderson			
Ashe		Lee	Pondberry
Buncombe		Heartleaf, Dwarf-flowered <i>Hexastylis naniflora</i>	<i>Lindera melissifolia</i>
Burke		Burke	Bladen
Caldwell			
Cumberland		Caldwell	
Watauga			
Sampson		Catawba	Spiraea, Virginia
Yancey		Cleveland	<i>Spiraea virginiana</i>
Bittercress, Small-anthered		Lincoln	Ashe
<i>Cardamine micrantha</i>		Polk	
Edgecombe			
Buncombe		Rutherford	Graham
Stokes		Heather, Mountain Golden	Macon
Blazing Star, Heller's		<i>Hudsonia montana</i>	Swain
<i>Liatris helleri</i>		Burke	Tyrrell
Ashe		Martin	Yancey
Burke			
Caldwell		Joint-vetch, Sensitive	Sumac, Michaux's
Watauga		<i>Aeschynomene virginica</i>	<i>Rhus michauxii</i>

Bluet, Roan Mountain	Beaufort	
Cumberland		
<i>Hedyotis purpurea var. montana</i>	Loosestrife, Rough-leaved	Davie
Ashe	<i>Lysimachia asperulaefolia</i>	Durham
Watauga	Beaufort	Franklin
Yancey	Bladen	Hoke
Chaffseed, American	Brunswick	
Johnston		
<i>Schwalbea americana</i>	Carteret	Lincoln
Bladen	Columbus	
Mecklenburg		
Cumberland	Cumberland	Moore
Hoke	Harnett	Orange
Moore	Hoke	
Richmond		
Pender	Moore	Robeson
Coneflower, Smooth	New Hanover	Wake
<i>Echinacea laevigata</i>	Onslow	Wilson
Durham	Pender	Sunflower,
Schweinitz's	Richmond	<i>Helianthus</i>
Granville		
<i>schweinitzii</i>	Meadowrue, Cooley's	Anson
Mecklenburg	<i>Thalictrum cooleyi</i>	
Montgomery		
Cabarrus		
Orange	Brunswick	
Davidson		
Rockingham	Columbus	
Mecklenburg		
Goldenrod, Blue Ridge	New Hanover	
Montgomery		
<i>Solidago spithamea</i>	Onslow	
Randolph		
Caldwell	Pender	Rowan
Watauga		Stanly

<u>Dicot</u>	<u>Mammal</u>	<u>Monocot</u>
Stokes Prairie Fringed Surry <i>praeclara</i> Union	Squirrel, Carolina Northern Flying <i>Glaucomys sabrinus coloratus</i>	Orchid, Western <i>Platanthera</i>
<u>Gastropod</u> Snail, Noonday <i>Mesodon clarki nantahala</i>	Buncombe Graham Haywood Jackson	Richland <b>Ohio</b>
Swain	Madison Martin	<u>Bivalve</u>
<u>Lichen</u> <i>stegaria</i>	Swain Coshocton	Fanshell <i>Cyprogenia</i>
Lichen, Rock Gnome <i>Gymnoderma lineare</i>	Watauga Yancey	Meigs Meigs Morgan
Ashe Washington Buncombe Washington		
Graham (Pearlymussel) Haywood Jackson Rutherford Lawrence	Arrowhead, Bunched <i>Sagittaria fasciculata</i> Buncombe Henderson	Mucket, Pink <i>Lampsilis abrupta</i> Gallia
Swain Yancey	Irisette, White <i>Sisyrinchium dichotomum</i>	Meigs Morgan
<u>Mammal</u> Washington	Henderson	
Bat, Gray <i>Myotis grisescens</i>	Polk	Mussel, Clubshell <i>Pleurobema clava</i>
Buncombe	Rutherford	Adams
Haywood Coshocton Madison Coshocton	Pink, Swamp <i>Helonias bullata</i> Ashtabula	
	Ashe	
	Henderson Delaware	
Bat, Indiana <i>Myotis sodalis</i>	Jackson	Fairfield Fairfield
Alexander	Pogonia, Small Whorled <i>Isotria medeoloides</i>	Franklin Greene Greene
Alleghany Ashe	Burke	Hancock Pickawa

y	Cleveland	Haywood	Trumbull
	Graham	Henderson	Tuscarawas
was	Jackson	Jackson	Union
	Macon	Macon	Williams
	Polk	Polk	Pearl mussel,
	Rutherford	Rutherford	
Purple Cat's Paw			<i>Epioblasma</i>
<i>obliquata obliquata</i>	Swain	Surry	Coshocton
on	Wilkes	Sedge, Golden	
	Yancey	<i>Carex lutea</i>	Pearl mussel,
White Cat's Paw			<i>Epioblasma</i>
<i>obliquata perobliqua</i>		Onslow	
Bat, Virginia Big-eared			Williams
<i>Corynorhinus</i> (=Plecotus)		Pender	Williams
<i>townssendii virginianus</i>			Riffleshell, Northern
<i>torulosa rangiana</i>			<i>Epioblasma</i>
Watauga			
Yancey		<u>Monocot</u>	Franklin
			Pickaway
y			
<u>Bivalve</u>		<u>Mammal</u>	<u>Mammal</u>
	Williams	Erie	Summit
<u>Dicot</u>		Fairfield	Trumbull
Clover, Running Buffalo		Franklin	
Tuscarawas			
<i>Trifolium stoloniferum</i>		Fulton	Union
Butler		Gallia	Van
Wert			
Clermont		Geauga	Vinton
Hamilton		Greene	Warren
Lawrence		Guernsey	
Washington			
Montgomery		Hamilton	Wayne
Warren		Hancock	Williams
		Harrison	Wood
Daisy, Lakeside			
<i>Hymenoxys herbacea</i>		Highland	Wyandot
Erie		Hocking	
Ottawa		Holmes	<u>Monocot</u>
Prairie Fringed		Huron	Orchid, Eastern
			<i>Platanthera</i>

<i>leucophaea</i>		
Monkshood, Northern Wild		
<i>leucophaea</i>		
<i>Aconitum noveboracense</i>	Jackson	
Coshocton		
Hocking	Jefferson	Holmes
Portage	Knox	Lucas
Summit	Lake	Ottawa
	Lawrence	
	Sandusky	
<i>Spiraea, Virginia</i>		
Sandusky		
<i>Spiraea virginiana</i>	Licking	Wayne
Scioto	Logan	Pogonia, Small
Whorled		
<b>Mammal</b>	Lorain	<i>Isotria medeoloides</i>
	Lucas	Hocking
Bat, Gray	Mahoning	Scioto
<i>Myotis grisescens</i>	Marion	Scioto
Perry		
<b>Oklahoma</b>	Medina	
Bat, Indiana	Meigs	<b>Bivalve</b>
<i>Myotis sodalis</i>	Montgomery	Mussel, Scaleshell
Adams	Morgan	Mussel, Scaleshell
Ashland	Morrow	<i>Leptodea leptodon</i>
Ashtabula		Le Flore
Athens	Muskingum	
	McCurtain	
Auglaize	Ottawa	
	Pushmataha	
Ouachita	Pickaway	Rock-pocketbook,
Belmont		
Ouachita	Pike	Rock-pocketbook,
Brown	Portage	(=Wheeler's pm)
Butler	Preble	<i>Arkansas wheeleri</i>
Carroll		<i>Arkansas wheeleri</i>
McCurtain		Le Flore
Champaign	Putnam	Le Flore
Pushmataha	McCurtain	
Clermont	Richland	
Clinton	Pushmataha	
	Ross	<b>Mammal</b>
		<b>Mammal</b>

Columbiana	Sandusky	Bat, Gray
Coshcocton	Scioto	Bat, Gray <i>Myotis griseescens</i>
Cuyahoga	Seneca	Adair
	Stark	
	Cherokee	
Delaware		
<b>Mammal</b>	<b>Dicot</b>	<b>Monocot</b>
Delaware	Daisy, Willamette	Fritillary, Gentner's
Bat, Indiana	<i>Erigeron decumbens</i> var.	<i>Fritillaria gentneri</i>
<i>Myotis sodalis</i>	Benton	Jackson
Adair	Lane	
Josephine	Linn	Lily, Western
Cherokee	Marion	<i>Lilium occidentale</i>
Craig	Polk	Coos
Delaware	Lomatium, Bradshaw's	
Haskell		
<b>Pennsylvania</b>	<i>Lomatium bradshawii</i>	<b>Bivalve</b>
Latimer	Benton	
Le Flore	Lane	Mussel, Clubshell
McCurtain	Linn	<i>Pleurobema clava</i>
Pittsburg	Marion	Clarion
Pushmataha	Polk	
Sequoyah	Lomatium, Cook's	Erie
Crawford	<i>Lomatium cookii</i>	Mercer
Wagoner	Jackson	Venango
Bat, Ozark Big-eared	Josephine	Riffleshell, Northern
<i>Corynorhinus</i> (=Plecotus) <i>townsendii ingens</i>		<i>Epioblasma</i>
Adair	Lupine, Kincaid's	
<i>torulosa rangiana</i>	<i>Lupinus sulphureus</i> (=oreganus)	
Cherokee	<i>ssp. kincaidii</i> (=var. <i>kincaidii</i> )	Erie
Crawford	Benton	Mercer
Delaware	Douglas	Venango
Sequoyah	Lane	
<b>Monocot</b>	Linn	
Orchid, Western Prairie Fringed	Polk	
<i>Platanthera praecox</i>	Yamhill	
Craig	Meadowfoam, Large-flowered Woolly	
Rogers		
<b>Oregon</b>	<i>Limnanthes floccosa</i> ssp. <i>Grandiflora</i>	<b>Mammal</b>
Allegheny	Armstrong	
<b>Crustacean</b>	Jackson	Bat, Indiana
Fairy Shrimp, Vernal Pool	Popcornflower, Rough	<i>Myotis sodalis</i>
<i>Branchinecta lynchii</i>	<i>Plagiobothrys hirtus</i>	Adams
Jackson	Douglas	
		Beaver
		Bedford
		Berks
		Blair

<b>Dicot</b>		
Checker-mallow, Nelson's	Thelypody, Howell's Spectacular	Bradford
<i>Sidalcea nelsoniana</i>	<i>Thelypodium howellii spectabilis</i>	Bucks
Benton	Baker	Butler
Clackamas	Union	Cambria
Cameron	<b>Mammal</b>	
Linn	Deer, Columbian White-tailed	Carbon
Marion	<i>Odocoileus virginianus leucurus</i>	Centre
Polk	Columbia	Chester
Washington	Douglas	Clarion
Yamhill	Multnomah	
Clearfield		
<b>Mammal</b>	<b>Monocot</b>	Clinton
Columbia	<b>Mammal</b>	<b>Dicot</b>
<i>glandulosa</i> (ncn)		Chamaecrista
Crawford		<i>Chamaecrista</i>
<i>glandulosa</i> var.	Chester	
Cumberland	<b>Monocot</b>	Dorado
Dauphin	Bulrush, Northeastern (=Barbed	Manati
Delaware	<i>Scirpus ancistrochaetus</i>	Vega
Alta	Clinton	Vega
Baja	Cumberland	Chumbo, Higo
Fayette	Dauphin	<i>Harrisia</i>
Franklin		
<i>portoricensis</i>	Franklin	
Fulton	Huntingdon	Chupacallos
Mayaguez	Lackawanna	<i>Pleodendron</i>
Greene		
Huntingdon	Monroe	Arecibo
<i>macranthum</i>	Union	
Indiana	Pogonia, Small Whorled	Rio
Jefferson		
Naguabo	<i>Isotria medeoloides</i>	Cobana Negra
Juniata	Centre	<i>Stahlia</i>
Grande		
Lackawanna		Cabo
Lancaster	Venango	
<i>monosperma</i>		
Lawrence		
Rojo	Lebanon	Lajas
	Lehigh	Lajas
	Luzerne	Luquillo
Grande		Rio
Lycoming	<b>Puerto Rico</b>	Vieques
Mercer	<b>Dicot</b>	<i>Cordia bellonis</i>
(ncn)		
Mifflin	Auerodendron pauciflorum (ncn)	<i>Cordia bellonis</i>
Monroe	<i>Auerodendron pauciflorum</i>	Maricao
Montgomery	Isabela	Daphnopsis
<i>hellerana</i> (ncn)	Bariaco	
Montour	<i>Trichilia triacantha</i>	
	Cabo Rojo	<i>Daphnopsis</i>

<i>hellerana</i>		
Northampton	Guanica	Dorado
Northumberland	Guayanilla	Isabela
Perry	Yauco	
Pike	Boxwood, Vahl's	<i>Erubia</i> <i>Solanum</i>
<i>drymophilum</i>		
Potter	<i>Buxus vahlii</i>	Adjuntas
Schuylkill	Aguada	Eugenia
Woodburyana	Bayamon	<i>Eugenia</i>
Snyder	Rincon	Cabo
<i>woodburyana</i>		
Somerset		
Rojo	<i>Calyptanthes Thomasiana</i> (ncn)	Guanica
	<i>Calyptanthes thomasiana</i>	Lajas
	Vieques	<i>Gesneria pauciflora</i>
(ncn)		
Susquehanna	Capa Rosa	<i>Gesneria pauciflora</i>
Tioga	<i>Callicarpa ampla</i>	Maricao
Union	Naguabo	Sabana
Venango	Rio Grande	Goetzea, Beautiful
Washington		
Wayne	<i>Catesbaea Melanocarpa</i> (ncn)	<i>Goetzea elegans</i>
Grande	<i>Catesbaea melanocarpa</i>	Isabela
Westmoreland	Cabo Rojo	
(Matabuey)		
Wyoming		
York		
Squirrel, Delmarva Peninsula Fox		
Quebradillas		

<u>Dicot</u>	<u>Dicot</u>	<u>Ferns</u>
Higuer De Sierra	Lares	Fern,
<i>Elaphoglossum serpens</i>	Rio Grande	<i>Elaphoglossum</i>
<i>Crescentia portoricensis</i>	Utuado	Jayuya
<i>serpens</i>	Palo de Ramon	Fern, <i>Thelypteris</i>
Maricao	<i>Banara vanderbiltii</i>	<i>Thelypteris</i>
Sabra Grande	Dorado	Ciales
inabonensis	Palo de Rosa	Ponce
San German	<i>Ottoschulzia rhodoxylon</i>	Fern, <i>Thelypteris</i>
inabonensis	Guanica	<i>Thelypteris</i>
Yauco	Maricao	Hatillo
Holly, Cook's	Sabana Grande	
<i>Ilex cookii</i>	Yauco	San
verecunda	Peperomia, Wheeler's	Fern, <i>Thelypteris</i>
Jayuya	<i>Peperomia wheeleri</i>	<i>Thelypteris</i>
verecunda	Isabela	Ciales
Ponce	Prickly-ash, St. Thomas	Yauco
<i>Ilex sintenisi</i> (ncn)	<i>Zanthoxylum thomasianum</i>	<i>Polystichum</i>
Quebradillas	Coamo	<i>Polystichum</i>
<i>Ilex sintenisi</i>	Isabela	
Sebastian	Schoepfia arenaria (ncn)	Tectaria
Ceiba	<i>Schoepfia arenaria</i>	Tectaria
yaucensis	Fajardo	Arecibo
Rio Grande	Isabela	Tree Fern, Elfin
yaucensis	Loiza	<i>Cyathea</i>
<i>Lyonia truncata</i> var. <i>proctorii</i> (ncn)	Ternstroemia subsessilis (ncn)	Jayuya
<i>Lyonia truncata</i> var. <i>proctorii</i>	<i>Ternstroemia subsessilis</i>	<u>Monocot</u>
Cabo Rojo	Naguabo	
calderonense (ncn)	Uvillo	Aristida chaseae
Lajas	<i>Eugenia haematocarpa</i>	Aristida chaseae
calderonense	Cayey	Cabo
Mitracarpus Maxwelliae	Naguabo	Lajas
Penuelas	Rio Grande	Cranichis Ricartii
<i>Mitracarpus maxwelliae</i>	Vernonia Proctorii (ncn)	<i>Cranichis ricartii</i>
Estremerana	<i>Vernonia proctorii</i>	Maricao
Guanica		San
estremerana		
Lajas		
Mitracarpus Polycladus		
<i>Mitracarpus polycladus</i>		
<i>dryopteroides</i>		
Guanica		
Lajas		
Myrcia Paganii		
(ncn)		
<i>Myrcia paganii</i>		
Arecibo		
Rojo		
Quebradillas		
Vieques		
Palo Colorado ( <i>Ternstroemia</i>		
<i>luquillensis</i> )		
<i>Ternstroemia luquillensis</i>		
German		

Luquillo eltorensis (ncn)	Cabo Rojo	Lepanthes
Rio Grande eltorensis (ncn)	Lajas	Lepanthes
<i>eltorensis</i>		<i>Lepanthes</i>
Palo de Jazmin	Walnut, Nogal	
Naguabo		
<i>Styrax portoricensis</i>	<i>Juglans jamaicensis</i>	Rio
Grande		
Rio Grande	Adjuntas	
Palo de Nigua	<b>Ferns</b>	Manaca, palma de
<i>rivalis</i>		<i>Calyptromoma</i>
<i>Cornutia obovata</i>		
Arecibo	Fern, <i>Adiantum vivesii</i>	Arecibo
Barranquitas	<i>Adiantum vivesii</i>	Camuy
Hatillo	Quebradillas	Hatillo
		Quebrad
illas		
<b>Monocot</b>	<b>Dicot</b>	<b>Dicot</b>
San Sebastian	Barnwell	
Edgefield		
Utuado	Beaufort	
McCormick		
Pelos del Diablo	Berkeley	Harperella
<i>Aristida portoricensis</i>	Charleston	<i>Ptilimnium</i>
<i>nodosum</i>		
Cabo Rojo	Clarendon	Aiken
Hormigueros	Florence	Barnwell
Lajas	Georgetown	Heartleaf, Dwarf-
flowered		
Mayaguez	Horry	<i>Hexastylis naniflora</i>
<b>Rhode Island</b>	Jasper	
Greenville		
<b>Dicot</b>		
Gerardia, Sandplain leaved	Lee	York
<i>Agalinis acuta</i>	Spartanburg	Loosestrife, Rough-
<i>asperulaefolia</i>	Sumter	
Washington	Coneflower, Smooth	
Darlington	<i>Echinacea laevigata</i>	<i>Lysimachia</i>
<b>Mammal</b>		
Greenwood	Aiken	
Bat, Indiana	Allendale	
<i>Myotis sodalis</i>		
Providence	Anderson	Horry
	Barnwell	Kershaw
	Lancaster	Marlboro
<b>Monocot</b>		
Pogonia, Small Whorled	Lexington	Pickens
<i>Isotria medeoloides</i>	Oconee	Richland
Mountain Sweet	Pickens	Richland
		Pitcher-plant,

Providence <i>ssp. jonesii</i>	Richland	<i>Sarracenia rubra</i>
<b>South Carolina</b> Greenville	Dropwort, Canby's	
<b>Bivalve</b>	<i>Oxypolis canbyi</i>	Pondberry
Mussel, Heelsplitter Carolina	Allendale	<i>Lindera melissifolia</i>
<i>Lasmigona decorata</i>	Bamberg	Barnwell
Edgefield	Barnwell	Beaufort
Greenwood	Beaufort	Berkeley
Charleston	Berkeley	
Kershaw	Charleston	Colleton
Lancaster	Clarendon	
Dorchester	Colleton	
McCormick	Dorchester	Horry
Georgetown	Georgetown	Sunflower,
<b>Dicot</b>	Horry	Sunflower,
Schweinitz's	Jasper	
Amaranth, Seabeach	Lee	Horry
Schweinitz's	Marlboro	
<i>Amaranthus pumilus</i>	Orangeburg	York
<i>schweinitzii</i>	Pickens	York
Charleston	Richland	Quillwort, Black-
Georgetown		
Lancaster		
Horry		
Lexington		
Amphianthus, Little	Sumter	<b>Ferns</b>
<i>Amphianthus pusillus</i>	Gooseberry, Miccosukee	
Lancaster	<i>Ribes echinellum</i>	
<b>spored</b>		
York		
<i>melanospora</i>		<i>Isoetes</i>
Chaffseed, American		
Lancaster		
<i>Schalbea americana</i>		

### Lichen

<u>Lichen</u>	<u>Bivalve</u>	<u>Bivalve</u>
Lichen, Rock Gnome	Combshell, Upland	Mussel,
Cumberland Elktoe		
<i>Gymnoderma lineare</i>	<i>Epioblasma metastriata</i>	<i>Alasmidonta</i>
<i>atropurpurea</i>		
Greenville	Bradley	Morgan
<u>Mammal</u>	Polk	Mussel,
Cumberland Pigtoe		
Bat, Indiana	Elktoe, Appalachian	<i>Pleurobema</i>
<i>gibberum</i>		
<i>Myotis sodalis</i>	<i>Alasmidonta raveneliana</i>	Warren
Oconee	Unicoi	White
<u>Monocot</u>	Fanshell	Mussel, Fine-lined
Pocketbook	<i>Cyprogenia stegaria</i>	<i>Lampsilis altilis</i>
Arrowhead, Bunched		
<i>Sagittaria fasciculata</i>	Anderson	Bradley
Greenville	Smith	Polk
Pigtoe	Kidneyshell, Triangular	Mussel, Fine-rayed
Irisette, White		
<i>cuneolus</i>	<i>Ptychobranchus greenii</i>	<i>Fusconaia</i>
<i>Sisyrinchium dichotomum</i>		
Greenville	Bradley	
Anderson	Polk	Blount
Pink, Swamp		
<i>Helonias bullata</i>	Mucket, Pink (Pearlymussel)	
Claiborne		
Greenville	<i>Lampsilis abrupta</i>	Cocke
	Anderson	Grainger
Pogonia, Small Whorled		
<i>Isotria medeoloides</i>	Benton	Hamilton
Greenville	Claiborne	Hawkins
Oconee	Greene	
	Jefferson	
Trillium, Persistent	Hamilton	Knox
<i>Trillium persistens</i>	Jefferson	Lincoln
Oconee	Knox	Lincoln
Trillium, Relict	Loudon	Moore
<i>Trillium reliquum</i>	Marion	Roane
Aiken	Montgomery	
	Sequatchie	
Edgefield	Roane	Sullivan
Clubshell	Smith	Mussel, Ovate
<b>South Dakota</b>	Sumner	<i>Pleurobema</i>

*perovatum*

**Mammal**

Ferret, Black-footed  
*Mustela nigripes*  
*capsaeformis*

Fall River  
Claiborne

**Monocot**

Orchid, Western Prairie Fringed  
(=Golf Stick)  
*Platanthera praecox*  
(=Golf Stick)

Brookings  
Minnehaha

Moody

Turner

Pigtoe

Yankton

Pigtoe

*plenum*

**Tennessee**

Anderson

**Bivalve**

Cheatham  
Cheatham  
Claiborne  
Claiborne  
Davidson  
Davidson  
Dickson  
Grainger  
Hamilton  
Jefferson  
Jefferson  
Knox  
Marion  
Montgomery  
Roane  
Montgomery  
Sevier  
Smith

Mussel, Shiny Pigtoe  
Green-blossom  
*Fusconaia cor*  
*torulosa gubernaculum*

Anderson  
Anderson  
Claiborne

Wilson

Mussel, Alabama Moccasinshell  
*Medionidus acutissimus*

Bradley

Mussel, Coosa Moccasinshell  
*Medionidus parvulus*

Bradley

Polk

Mussel, Cumberland Combshell  
*Epioblasma brevidens*

Claiborne

Davidson

Smith

Bradley

Mussel, Oyster  
*Epioblasma*

Cocke  
Sevier

Mussel, Ring Pink

Mussel, Ring Pink

*Obovaria retusa*

Benton  
Smith

Wilson

Mussel, Rough

Mussel, Rough

*Pleurobema*

**Bivalve**

Bedford

Claiborne

Cocke

Giles

Grainger

Greene

Hawkins

Hickman

Knox

Lincoln

Maury

Roane

Sullivan

**Bivalve**

Giles  
Grainger  
Hamilton

Knox

Marion

Monroe

Roane  
Smith

Pearlymussel, Cracking

*Hemistena lata*

*Epioblasma*

Anderson

Claiborne

Claiborne		
Giles	Giles	Cocke
Grainger	Grainger	Grainger
Hawkins	Lincoln	Greene
Knox	Pearlymussel, Cumberland Bean	Hawkins
Lincoln	<i>Villosa trabalis</i>	
Jefferson		
Moore	Cumberland	Knox
Roane	Greene	Sullivan
Sullivan	Hawkins	Pearlymussel,
Little-wing		
Mussel, Southern Pigtoe	Knox	<i>Pegias fabula</i>
<i>Pleurobema georgianum</i>	Polk	Sullivan
Bradley	Pearlymussel, Cumberland	Warren
Polk	<i>Quadrula intermedia</i>	Pearlymussel,
Orange-footed		
Pearlymussel, Alabama Lamp	Bedford	<i>Plethobasus</i>
<i>cooperianus</i>		
<i>Lampsilis virescens</i>	Claiborne	
Anderson		
Anderson	Grainger	Benton
Marion	Hamilton	
Claiborne		
Morgan	Hawkins	
Davidson		
Roane	Knox	Hamilton
Pearlymussel, Appalachian	Lincoln	Knox
Monkeyface	Maury	Loudon
<i>Quadrula sparsa</i>	Monroe	Marion
Claiborne	Moore	Maury
Grainger	Roane	
Montgomery		
Monroe	Sullivan	Roane
Roane		Sevier
Pearlymussel, Birdwing	Pearlymussel, Dromedary	Sevier
<i>Conradilla caelata</i>	<i>Dromus dromas</i>	Smith
<b>Bivalve</b>	Anderson	Wilson
Pearlymussel, Pale Lilliput	<b>Bivalve</b>	<b>Crustacean</b>
Davidson	Pearlymussel, Yellow-blossom	
<i>Toxolasma cylindrellus</i>	<i>Epioblasma florentina florentina</i>	<b>Dicot</b>
Bedford	Anderson	Aster, Ruth's
Golden		
Giles	Bedford	<i>Pityopsis ruthii</i>
Hickman	Blount	Polk
Lewis	Cheatham	Avens, Spreading
Marion	Claiborne	<i>Geum radiatum</i>
Maury	Grainger	Blount
Moore	Knox	Sevier
Pearlymussel, Purple Cat's Paw	Lincoln	Bladderpod, Spring
Creek		
<i>Epioblasma obliquata obliquata</i>	Maury	<i>Lesquerella</i>
<i>perforata</i>		
Smith	Monroe	Wilson

Wilson	Moore	
Prairie Pearlymussel, Tuberclad-blossom <i>Epioblasma torulosa torulosa</i>	Polk Rutherford Smith	Clover, Leafy <i>Dalea foliosa</i> Bedford
Benton Davidson Davidson Greene Rutherford Hamilton Knox Lincoln	Purple Bean <i>Villosa perpurpurea</i>	Maury
Tennessee Purple Sullivan <i>tennesseensis</i>	Cumberland Hawkins Morgan	Sumner Wilson
Unicoi Davidson Washington Rutherford	Roane	Coneflower, <i>Echinacea</i>
Pearlymussel, Turgid-blossom <i>Epioblasma turgidula</i>	Rabbitsfoot, Rough <i>Quadrula cylindrica strigillata</i>	Wilson Ground-plum,
Guthrie's Bedford <i>bibullatus</i>	Claiborne Riffleshell, Tan <i>Epioblasma florentina walkeri (=E.</i> <i>walkeri)</i>	Astragalus
Grainger Davidson Hawkins	Anderson	Rutherford
rd Jefferson Knox	Bedford Davidson	Pitcher-plant,
Green		<i>Sarracenia</i>
<i>oreophila</i> Maury Moore Cumberland	Grainger Jefferson	
Roane	Knox	Potato-bean,
Price's Shelby	Lincoln Maury Davidson	<i>Apios priceana</i>
Pearlymussel, White Wartyback <i>Plethobasus cicatricosus</i>	Monroe Montgomery Polk	Giles Giles Marion
Anderson Claiborne Montgomery Davidson (=Braun's) Grainger <i>E. L. Braun</i> var.	Robertson Rutherford	Rock-cress, Large <i>Arabis perstellata</i> <i>ampla Rollins</i>

Jefferson	<u>Crustacean</u>	
Davidson		
Marion	Crayfish, Nashville	
Rutherford		
Smith		
<b>Dicot</b>	<i>Orconectes shoupi</i>	
Rock-cress, Small	<u>Gastropod</u>	
Anderson	Knox	
<i>Arabis perstellata</i> E. L. Braun var. <i>perstellata</i> Fernald	Loudon	Bedford
Davidson	Marion	Benton
Rosemary, Cumberland	<u>Lichen</u>	Bledsoe
<i>Conradina verticillata</i>	Lichen, Rock Gnome	Blount
Cumberland	<i>Gymnoderma lineare</i>	Blount
Cheatham		Bradley
Knox	Sevier	
Morgan	Cheatham	
Claiborne		Chester
White		Chester
Sandwort, Cumberland	<u>Mammal</u>	
<i>Arenaria cumberlandensis</i>	Bat, Gray	Cocke
Morgan	<i>Myotis grisescens</i>	Coffee
and	Anderson	Crockett
Skullcap, Large-flowered	Bedford	Cumberl
Davidson	Benton	
<i>Scutellaria montana</i>		
Hamilton	Bledsoe	Dickson
Marion	Cheatham	Fayette
Sequatchie	Claiborne	Giles
Spiraea, Virginia	Cocke	Grainger
<i>Spiraea virginiana</i>	Grainger	Greene
Blount	Greene	Hamilton
an	Hardeman	Hardem
Bradley	Hawkins	Hawkins
Cumberland	Hickman	Henders
on	Hamilton	Jefferson

	Morgan	Knox	Hickman
n			Jefferso
	Roane	Lawrence	Knox
	Sequatchie	Lincoln	Lawrenc
e	Unicoi	Marion	Lewis
		Maury	Lincoln
		Montgomery	
		Moore	Loudon
	Fern, American hart's-tongue <i>Asplenium scolopendrium var.</i> <i>americanum</i>	Overton	Marion
	Cumberland	Putnam	Maury
	Marion	Roane	Monroe
mery			Montgo
	Roane	Robertson	Moore
	Sullivan	Rutherford	Morgan
		Sequatchie	Overton
		Smith	
		Sullivan	
	Marstonia, Royal (=Royal Snail) <i>Pyrgulopsis ogmorhaphe</i>	Sumner	Polk
	Marion	Warren	Putnam
	Riversnail, Anthony's Robertson <i>Athearnia anthonyi</i> Rutherford	White	Roane
		Wilson	
	Anderson	Bat, Indiana	Sevier
	Sequatchie	<i>Myotis sodalis</i>	
	Greene		

<u>Mammal</u>	<u>Dicot</u>	<u>Dicot</u>
Shelby	Zapata	Dogweed, Ashy
Smith	Cactus, Black Lace	<i>Thymophylla</i>
<i>tephroleuca</i>		
Sullivan	<i>Echinocereus reichenbachii</i> var.	Starr
Sumner	Duval	Webb
Unicoi	Jim Wells	Zapata
Warren	Uvalde	Frankenia,
Johnston's	Cactus, Bunched Cory	<i>Frankenia</i>
Washington		
<i>johnstonii</i>		
White	<i>Coryphantha ramillosa</i>	Starr
Wilson	Brewster	Webb
Squirrel, Carolina Northern Flying	Cactus, Chisos Mountain Hedgehog	Zapata
<i>Glaucomys sabrinus coloratus</i>	<i>Echinocereus chisoensis</i> var.	Fruit, Earth
(=geocarpon)	<i>chisoensis</i>	<i>Geocarpon</i>
Blount		
<i>minimum</i>	Brewster	
Sevier	Cactus, Lloyd's Mariposa	Manioc, Walker's
Anderson	<i>Echinomastus mariposensis</i>	<i>Manihot walkerae</i>
<u>Monocot</u>		<i>Manihot walkerae</i>
Grass, Tennessee Yellow-eyed	Brewster	Hidalgo
<i>Xyris tennesseensis</i>		Hidalgo
Lewis	Presidio	Starr
Pogonia, Small Whorled	Cactus, Nellie Cory	Starr
<i>Isotria medeoloides</i>	<i>Coryphantha minima</i>	Oak, Hinckley
Hamilton	Brewster	Oak, Hinckley
Washington	Cactus, Sneed Pincushion	<i>Quercus hinckleyi</i>
	<i>Coryphantha sneedii</i> var. <i>sneedii</i>	Brewster
<u>Texas</u>	El Paso	Brewster
Trailing	<i>Phlox nivalis</i> ssp. <i>texensis</i>	Presidio
<u>Crustacean</u>	Hudspeth	Phlox, Texas
Amphipod, Peck's Cave	Cactus, Star	Hardin
<i>Stygobromus</i> (= <i>Stygonectes</i> ) <i>pecki</i>	<i>Astrophytum asterias</i>	Polk
Bexar	Cameron	Tyler
Green		Pitaya, Davis'
Hays	Hidalgo	<i>Echinocereus</i>
<i>viridiflorus</i> var. <i>davisii</i>		
Medina	Starr	Brewster
Uvalde	Cactus, Tobusch Fishhook	Poppy-mallow,
Texas		
<u>Dicot</u>	<i>Ancistrocactus tobuschii</i>	<i>Callirhoe</i>
<i>scabriuscula</i>		
Ambrosia, South Texas	Bandera	Runnels
<i>Ambrosia cheiranthifolia</i>	Edwards	Runnels
Large-fruited		Sand-verbena,
Cameron	Real	<i>Abronia</i>
<i>macrocarpa</i>		
Hidalgo	Uvalde	Leon

Jim Wells	Val Verde	
Robertson	Cat's-eye, Terlingua Creek	Snowbells, Texas
Ayenia, Texas	<i>Cryptantha crassipes</i>	Snowbells, Texas
<i>Ayenia limitaris</i>	Brewster	<i>Styrax texanus</i>
Cameron	Dawn-flower, Texas Prairie (=Texas	<i>Styrax texanus</i>
Hidalgo	Bitterweed)	
Willacy	<i>Hymenoxys texana</i>	Bandera
Bladderpod, Zapata	Fort Bend	Edwards
<i>Lesquerella thamnophila</i>	Harris	
Verde		Real
Starr		Uvalde
<b>Dicot</b>		Val
Sunflower, Pecos	<b>Mammal</b>	<b>Monocot</b>
<i>Helianthus paradoxus</i>	Jim Wells	Wild-rice, Texas
Pecos	La Salle	<i>Zizania texana</i>
<b>Gastropod</b>	Starr	Bexar
Snail, Pecos Assiminea	Webb	Hays
<i>Assiminea pecos</i>	Willacy	Medina
Pecos	Zapata	Medina
<b>Mammal</b>	Jaguarundi, Sinaloan	Uvalde
Bat, Mexican Long-nosed	<i>Herpailurus</i> (= <i>Felis</i> ) <i>yagouaroundi</i>	<b>Utah</b>
<i>Leptonycteris nivalis</i>	Brooks	<b>Dicot</b>
Brewster	Cameron	<i>tolteca</i> Bear-poppy, Dwarf
Washington	Hidalgo	<i>Arctomecon humilis</i>
Presidio	Jim Wells	Cactus, Siler
Pincushion	Starr	
Bear, Louisiana Black	Willacy	<i>Pediocactus</i>
<i>Ursus americanus luteolus</i>	Zapata	
(= <i>Echinocactus</i> , = <i>Utahia</i> ) <i>sileri</i>	Ocelot	Cactus, Uinta Basin
Anderson	<i>Leopardus</i> (= <i>Felis</i> ) <i>pardalis</i>	<i>Sclerocactus</i>
Washington	Brooks	
Angelina	Cameron	Cactus, Wright
Hookless	Dimmit	
<i>glaucus</i>	Duval	<i>Sclerocactus</i>
Bowie	Frio	Sevier
Cass	Hidalgo	<i>Cycladenia</i> , Jones
Duchesne	Jim Wells	<i>Cycladenia jonesii</i>
Cherokee	La Salle	
Fishhook	Starr	Grand
<i>wrightiae</i>	Webb	Milk-vetch, Deseret
Gregg	Willacy	<i>Astragalus</i>
Lamar		Utah
Lavaca		Milk-vetch,
(= <i>humilis</i> )		
Leon		
Morris		
Newton		
<i>desereticus</i>		
Panola		
Robertson		
Heliotrope		

Rusk	Zapata	<i>Astragalus montii</i>
Sabine	<u>Monocot</u>	<i>Sanpete</i>
Shelby	Ladies'-tresses, Navasota	<i>Sevier</i>
Smith	<i>Spiranthes parksii</i>	Milk-vetch,
Holmgren	Bastrop	<i>Astragalus</i>
Upshur		<i>Astragalus</i>
<i>holmgreniorum</i>		
<i>holmgreniorum</i>	Brazos	Milk-vetch, Shivwits
Victoria	Washington	<i>Milk-vetch, Shivwits</i>
Washington	Grimes	<i>Astragalus</i>
	Leon	
Washington	Milam	
Jaguarundi, Gulf Coast	Robertson	<i>Phacelia, Clay</i>
<i>ampullarioides</i>	Washington	<i>Phacelia argillacea</i>
<i>Herpailurus (=Felis) yagouaroundi</i>	Pondweed, Little Aguja Creek	Utah
Washington	<i>Potamogeton clystocarpus</i>	Primrose, Maguire
<i>cacomitli</i>	Jeff Davis	<i>Primula maguirei</i>
Washington	<u>Monocot</u>	Cache
Brooks		<u>Bivalve</u>
Cameron		Mussel, Fine-rayed
Dimmit		
Duval		<i>Fusconaia</i>
Frio		
Hidalgo		
<u>Dicot</u>		
Reed-mustard, Shubby	Windham	Lee
Pigtoe	<u>Virginia</u>	Russell
<i>Schoenocrambe suffrutescens</i>		Scott
<i>cuneolus</i>	Fanshell	Tazewell
Duchesne		
Ridge-cress (=Pepper-cress),		
<i>Lepidium barnebyanum</i>	<u>Bivalve</u>	
Duchesne		
Townsendia, Last Chance		
Washington		
<i>Townsendia aprica</i>		
Sevier		
<u>Mammal</u>		
<i>capsaeformis</i>		
Ferret, Black-footed		
<i>Mustela nigripes</i>		
Duchesne		
Grand		
San Juan		
Pigtoe		
<i>plenum</i>		
Prairie Dog, Utah		
<i>Cynomys parvidens</i>		
	Tazewell	Scott

Pigtoe	Sevier	Mussel, Cumberland Elktoe	Mussel, Shiny
	Washington	<i>Alasmidonta atropurpurea</i>	<i>Fusconaia cor</i>
	<b><u>Monocot</u></b>		<i>Fusconaia cor</i>
Ladies'-tresses, Ute		Tazewell	Lee
<i>Spiranthes diluvialis</i>		Mussel, Dwarf Wedge	Russell
		<i>Alasmidonta heterodon</i>	Scott
Duchesne	Amelia		
Salt Lake	Washington		
Appalachian	Chesterfield		Wise
Utah	Culpeper		Pearlymussel,
Appalachian	Cumberland		Pearlymussel,
Weber	Monkeyface		
Sedge, Navajo	Dinwiddie		<i>Quadrula sparsa</i>
<i>Carex specuicola</i>	Fauquier		Lee
San Juan	Franklin		Scott
Birdwing	Greenville		Scott
<b>Vermont</b>	Halifax		Pearlymussel,
<b><u>Bivalve</u></b>	Hanover		Lee
Mussel, Dwarf Wedge	King George		Russell
<i>Alasmidonta heterodon</i>	King William		Scott
Essex	Louisa		Scott
Orange	Washington		
Cracking	Lunenburg		Wise
<b><u>Mammal</u></b>	Nottoway		Pearlymussel,
Cracking	Orange		Pearlymussel,
Bat, Indiana	<i>Hemistena lata</i>		
<i>Myotis sodalis</i>	Prince Edward		Lee
Addison	Prince William		Russell
Bennington	Spotsylvania		Scott
Cumberland Bean	Stafford		Pearlymussel,
Chittenden	Westmoreland		<i>Villosa trabalis</i>
Rutland			Lee

<u>Bivalve</u>	<u>Bivalve</u>	<u>Dicot</u>
Russell	Spiny mussel, James River	
Charlotte		
Scott	<i>Pleurobema collina</i>	
Dinwiddie		
Tazewell		
Pearlymussel, Cumberland	Albemarle	Floyd
<i>Quadrula intermedia</i>	Amherst	Franklin
Lee	Botetourt	Grayson
Russell	Floyd	Halifax
Lunenburg	Fluvanna	
Scott	Franklin	
Mecklenburg	Goochland	
Washington	Nelson	Nelson
Montgomery	Patrick	
Pearlymussel, Dromedary	Pittsylvania	
<i>Dromus dromas</i>	Powhatan	Prince
Nottoway		
Lee	Rockbridge	Pulaski
Pittsylvania	<u>Crustacean</u>	Roanoke
Scott	Isopod, Lee County Cave	
Edward		
Pearlymussel, Green-blossom	<i>Lirceus usdagalun</i>	Wythe
<i>Epioblasma torulosa gubernaculum</i>	Lee	
Scott	Isopod, Madison Cave	Harperella
Rockbridge		<i>Ptilimnium</i>
Pearlymussel, Little-wing	<i>Antrolana lira</i>	
<i>Pegas fabula</i>	Augusta	
Lee	Rockingham	Prince
<i>nodosum</i>	Warren	Stafford
Russell		Joint-vetch,
Frederick	<u>Dicot</u>	
Scott		<i>Aeschynomene</i>
Mecklenburg	Amaranth, Seabeach	
Tazewell	<i>Amaranthus pumilus</i>	Caroline
William	Accomack	
Washington	Northampton	Essex
Purple Bean	Bittercress, Small-anthered	Fairfax
Sensitive	<i>Cardamine micrantha</i>	Hanover
<i>Villosa perpurpurea</i>	Patrick	Hanover
<i>virginica</i>		James
Lee		
Russell	Chaffseed, American	King and
Chesterfield		
Scott		King
Tazewell		
Washington		
Rabbitsfoot, Rough		
City		
<i>Quadrula cylindrica strigillata</i>		
Queen		

George	Lee	<i>Schwalbea americana</i>	King
George	Russell	Greenville	King
William	Scott		Prince
William	Tazewell Richmond Washington	Coneflower, Smooth Richmond <i>Echinacea laevigata</i>	Stafford
Riffleshell, Tan Westmoreland		Amelia Amherst	
<i>Epioblasma florentina walkeri</i> (=E. Barren <i>walkeri</i> )		Appomattox	Rock-cress, Shale
Barren	Russell	Bedford	<i>Arabis serotina</i>
	Tazewell	Bland	Augusta
	Washington	Botetourt	Bath
		Brunswick	Page
ge		Campbell	Rockbrid

<u>Dicot</u>	<u>Mammal</u>	<u>Mammal</u>
Shenandoah	Scott	
Montgomery		
Sneezeweed, Virginia	Tazewell	Pulaski
<i>Helenium virginicum</i>	Washington	
Rockingham		
Augusta	Wise	Russell
Nelson	Bat, Indiana	
Shenandoah		
Rockingham	<i>Myotis sodalis</i>	Tazewell
Spiraea, Virginia	Albemarle	Squirrel, Delmarva
Peninsula Fox		
<i>Spiraea virginiana</i>	Amherst	<i>Sciurus niger</i>
<i>cinereus</i>		
Buchanan	Augusta	
Accomack		
Carroll	Bath	
Northampton		
Grayson	Bedford	<u>Monocot</u>
Lee	Bland	Bulrush,
Northeastern (=Barbed		
Russell	Botetourt	<i>Scirpus</i>
<i>ancistrochaetus</i>		
Scott	Buchanan	Augusta
Tazewell	Fauquier	Bath
Washington	Floyd	
Botetourt		
Wise	Frederick	
Rockbridge	Grayson	
Wythe		
Rockingham		
Sumac, Michaux's	Greene	
Shenandoah		
<i>Rhus michauxii</i>	Lee	Orchid, Eastern
Prairie Fringed		
Amelia	Madison	<i>Platanthera</i>
<i>leucophaea</i>		
Brunswick	Montgomery	Augusta
Charlotte	Nelson	
Chesterfield	Page	Pink, Swamp
Cumberland	Pulaski	<i>Helonias bullata</i>
Dinwiddie	Rappahannock	Augusta
Greenville	Roanoke	Caroline
Halifax	Rockbridge	Hanover
William		King
Lunenburg	Rockingham	
Mecklenburg	Russell	Nelson
Spotsylvania		
Nottoway	Scott	Pogonia, Small
Whorled		
Prince Edward	Shenandoah	<i>Isotria medeoloides</i>
Sunflower, Schweinitz's	Tazewell	Amherst
<i>Helianthus schweinitzii</i>	Warren	

Appomattox		Washington	Bedford
Patrick		Wise	
<b>Gastropod</b>			
Botetourt			
Snail, Virginia Fringed Mountain			
Buckingham			
<i>Polygyriscus virginianus</i>		Bat, Virginia Big-eared	Caroline
Pulaski		<i>Corynorhinus (=Plecotus)</i>	Essex
		<i>townsendii virginianus</i>	Essex
<b>Mammal</b>			
Bat, Gray		Augusta	Fairfax
<i>Myotis grisescens</i>		Bath	Franklin
Gloucester		Bland	
Lee			
Russell		Buchanan	Hanover
James			
City			
<b>Monocot</b>		<b>Mammal</b>	<b>Bivalve</b>
King George		Bear, Grizzly	Pearlymussel,
Tuberclad-blossom		<i>Ursus arctos horribilis</i>	<i>Epioblasma</i>
King William			
<i>torulosa torulosa</i>			
Lee		Chelan	Fayette
Madison		King	Spiny mussel,
James River		Kittitas	
Pittsylvania		Lewis	<i>Pleurobema collina</i>
Prince William		Okanogan	Monroe
Rockbridge		Pierce	
Spotsylvania		Skagit	<b>Dicot</b>
Buffalo			Clover, Running
Stafford		Snohomish	
<i>stoloniferum</i>		Stevens	
Wise		Whatcom	Fayette
<b>Washington</b>		Yakima	
Randolph			Tucker
<b>Dicot</b>			Tucker
Catchfly, Spalding's			Webster
<i>Silene spaldingii</i>		Deer, Columbian White-tailed	
		<i>Odocoileus virginianus leucurus</i>	
<i>nodosum</i>			Harperella
Asotin			Harperella
Jefferson		Clark	<i>Ptilimnium</i>
Lincoln		Cowlitz	
Spokane		Pacific	Rock-cress, Shale
Barren			
Whitman		Skamania	<i>Arabis serotina</i>
Greenbrier			
Checker-mallow, Nelson's		Wahkiakum	Hardy
<i>Sidalcea nelsoniana</i>			
Rabbit, Pygmy			
Pendleton			

Cowlitz	<i>Brachylagus idahoensis</i>	Spiraea, Virginia <i>Spiraea virginiana</i> <i>Spiraea virginiana</i>
Checker-mallow, Wenatchee Mountains	Adams	Fayette
<i>Sidalcea oregana</i> var. <i>calva</i>	Benton	Fayette
Chelan Greenbrier	Douglas Greenbrier	Mercer
Howellia, Water <i>Howellia aquatilis</i>	Grant Lincoln	Mercer Nicholas
Clark	<b>West Virginia</b>	Raleigh
Mason	<u>Bivalve</u>	Upshur
Spokane	Fanshell <i>Cyprogenia stegaria</i>	<b>Gastropod</b>
Thurston	Fayette	Snail, Flat-spired
Three-toothed		<i>Triodopsis</i>
Lupine, Kincaid's <i>platysayoides</i>		
<i>Lupinus sulphureus</i> (= <i>oreganus</i> )	Mucket, Pink (Pearlymussel) <i>Lampsilis abrupta</i>	Preston
Monongalia <i>ssp. kincaidii</i> (=var. <i>kincaidii</i> )	Cabell	<b>Mammal</b>
Lewis	Fayette	<b>Mammal</b>
Paintbrush, Golden <i>Castilleja levisecta</i>	Mason	Bat, Gray
Island	Wood	<i>Myotis grisescens</i>
San Juan		
Pendleton		
Thurston	Mussel, Clubshell <i>Pleurobema clava</i>	Bat, Indiana
Stickseed, Showy <i>Hackelia venusta</i>	Clay	<i>Myotis sodalis</i>
Chelan	Wirt	Barbour
		Barbour
		Berkeley
		Brooke

### Mammal

<u>Mammal</u>	<u>Monocot</u>	<u>Dicot</u>
Cabell Calhoun Clay Doddridge Manitowoc Fayette Sheboygan Gilmer	Bulrush, Northeastern (=Barbed <i>Scirpus ancistrochaetus</i> Berkeley	Thistle, Pitcher's <i>Cirsium pitcheri</i> Door
Grant Greenbrier Hampshire Hancock Hardy Harrison Jackson Jefferson	<b>Wisconsin</b>	
Lewis Marion	<u>Bivalve</u>	<u>Mammal</u>
Marshall Mason Mercer Mineral	Mussel, Winged Mapleleaf <i>Quadrula fragosa</i> Polk Pearlymussel, Higgins' Eye <i>Lampsilis higginsii</i> Crawford Dane Grant	Lynx, Canada <i>Lynx canadensis</i> Bayfield Burnett Florence Sawyer Vilas
Prairie Fringed	Iowa Jackson	Iris, Dwarf Lake <i>Iris lacustris</i>
<i>leucophaea</i>	La Crosse Pierce Polk Richland	Brown Door
Monongalia Monroe Nicholas Jefferson	Sauk Trempealeau Vernon	Orchid, Eastern
Pendleton		<i>Platanthera</i>
Preston Putnam	Dicot	Kenosha
	Clover, Prairie Bush <i>Lespedeza leptostachya</i>	Ozaukee Rock
an		Sheboyg
Raleigh Walworth Randolph Waukesha Roane Winnebago Summers Taylor Tucker Upshur	Dane Grant Green Pierce Rock Sauk Locoweed, Fassett's	<b>Wyoming</b>
Colorado	<i>Oxytropis campestris var. chartacea</i>	<u>Dicot</u>
Webster <i>neomexicana</i> var. Wetzel	Bayfield	Butterfly Plant, <i>Gaura</i> Laramie

Wirt	Portage	Yellowhead, Desert
Wood	Monkshood, Northern Wild	<i>Yerma</i>
<i>xanthocephalus</i>		
Bat, Virginia Big-eared		Fremont
<i>Corynorhinus</i> (= <i>Plecotus</i> )		<u>Mammal</u>
<i>townsendii virginianus</i>		<u>Mammal</u>
Grant	Monroe	
	Richland	Bear, Grizzly
<i>horribilis</i>		<i>Ursus arctos</i>
Pendleton	Sauk	
<i>horribilis</i>		
Tucker	Vernon	Fremont
<u>Monocot</u>		Park

### Mammal

Ferret, Black-footed  
*Mustela nigripes*

Big Horn  
 Fremont  
 Goshen  
 Laramie  
 Park  
 Platte  
 Sheridan  
 Washakie

Mouse, Preble's Meadow Jumping  
*Zapus hudsonius preblei*

Laramie  
 Platte

## 930 Species Affected:

### Inverse Name:

	<b>Taxa:</b>	<b>Co. occurrence:</b>	<b>Status:</b>
(ncn)	Dicot	16	Endangered
Abalone, White	Gastropod	18	Endangered
Abutilon eremitopetalum (ncn)	Dicot	4	Endangered
Abutilon sandwicense (ncn)	Dicot	3	Endangered
Achyranthes mutica (ncn)	Dicot	4	Endangered
Achyranthes splendens var. rotundata (ncn)	Dicot	3	Endangered
A'e (Zanthoxylum dipetalum var. tomentosum)	Dicot	4	Endangered
A'e (Zanthoxylum hawaiiense)	Dicot	12	Endangered
'Aiea (Nothocestrum breviflorum)	Dicot	4	Endangered
'Aiea (Nothocestrum peltatum)	Dicot	4	Endangered
Akoko	Dicot	4	Endangered
'Akoko	Dicot	4	Endangered
'Akoko (Chamaesyce celastroides var. kaenana)	Dicot	3	Endangered
'Akoko (Chamaesyce deppeana)	Dicot	3	Endangered
'Akoko (Chamaesyce herbstii)	Dicot	3	Endangered
'Akoko (Chamaesyce kuwaleana)	Dicot	3	Endangered
'Akoko (Chamaesyce rockii)	Dicot	3	Endangered
'Akoko (Chamaesyce skottsbergii var. skottsbe	Dicot	7	Endangered
'Akoko (Euphorbia haeleleana)	Dicot	7	Endangered
alani	Dicot	12	Endangered
Alani (Melicope adscendens)	Dicot	4	Endangered
Alani (Melicope balloui)	Dicot	4	Endangered
Alani (Melicope haupuensis)	Dicot	4	Endangered
Alani (Melicope knudsenii)	Dicot	8	Endangered
Alani (Melicope lydgatei)	Dicot	3	Endangered
Alani (Melicope mucronulata)	Dicot	4	Endangered
Alani (Melicope munroi)	Dicot	4	Endangered
Alani (Melicope ovalis)	Dicot	4	Endangered
Alani (Melicope pallida)	Dicot	4	Endangered
Alani (Melicope quadrangularis)	Dicot	4	Endangered
Alani (Melicope reflexa)	Dicot	4	Endangered
Alani (Melicope saint-johnii)	Dicot	3	Endangered
Alani (Melicope zahlbruckneri)	Dicot	4	Endangered
Allocarya, Calistoga	Dicot	3	Endangered
Alopecurus, Sonoma	Monocot	5	Endangered
Alsinidendron obovatum (ncn)	Dicot	3	Endangered
Alsinidendron trinerve (ncn)	Dicot	3	Endangered
Alsinidendron viscosum (ncn)	Dicot	4	Endangered
Amaranthus brownii (ncn)	Dicot	3	Endangered
Ambersnail, Kanab	Gastropod	3	Endangered
Ambrosia, San Diego	Dicot	6	Endangered
Ambrosia, South Texas	Dicot	7	Endangered
Amphipod, Illinois Cave	Crustacean	2	Endangered
Amphipod, Kauai Cave	Crustacean	4	Endangered
Amphipod, Peck's Cave	Crustacean	5	Endangered
'Anaunau (Lepidium arbuscula)	Dicot	3	Endangered
'Anunu (Sicyos alba)	Dicot	4	Endangered
Aristida chaseae (ncn)	Monocot	2	Endangered
Arrowhead, Bunched	Monocot	3	Endangered
Asplenium fragile var. insulare (ncn)	Ferns	4	Endangered
Aster, Florida Golden	Dicot	9	Endangered
Aster, Ruth's Golden	Dicot	1	Endangered
Auerodendron pauciflorum (ncn)	Dicot	1	Endangered

Aupaka ( <i>Isodendron hosakae</i> )	Dicot	4	Endangered
Aupaka ( <i>Isodendron laurifolium</i> )	Dicot	7	Endangered
Avens, Spreading	Dicot	8	Endangered
awikiwiki	Dicot	4	Endangered
'Awikiwiki ( <i>Canavalia molokaiensis</i> )	Dicot	4	Endangered
'Awiwi ( <i>Centaurium sebaeoides</i> )	Dicot	8	Endangered
'Awiwi ( <i>Hedyotis cookiana</i> )	Dicot	8	Endangered
Ayenia, Texas	Dicot	7	Endangered
Barberry, Island	Dicot	4	Endangered
Barberry, Nevin's	Dicot	7	Endangered
Bariaco	Dicot	4	Endangered
Bat, Gray	Mammal	168	Endangered
Bat, Hawaiian Hoary	Mammal	15	Endangered
Bat, Indiana	Mammal	750	Endangered
Bat, Lesser (=Sanborn's) Long-nosed	Mammal	18	Endangered
Bat, Mexican Long-nosed	Mammal	3	Endangered
Bat, Ozark Big-eared	Mammal	5	Endangered
Bat, Virginia Big-eared	Mammal	23	Endangered
Beargrass, Britton's	Monocot	17	Endangered
Bear-poppy, Dwarf	Dicot	1	Endangered
Bedstraw, El Dorado	Dicot	3	Endangered
Bedstraw, Island	Dicot	4	Endangered
Bellflower, Brooksville	Dicot	3	Endangered
Bird's-beak, Palmette-bracted	Dicot	18	Endangered
Bird's-beak, Pennell's	Dicot	2	Endangered
Bird's-beak, salt marsh	Dicot	21	Endangered
Bird's-beak, Soft	Dicot	7	Endangered
Bittercress, Small-anthered	Dicot	3	Endangered
Bladderpod, San Bernardino Mountains	Dicot	3	Endangered
Bladderpod, Spring Creek	Dicot	1	Endangered
Bladderpod, Zapata	Dicot	2	Endangered
Blazing Star, Scrub	Dicot	6	Endangered
Bluegrass, Hawaiian	Monocot	4	Endangered
Bluegrass, Mann's ( <i>Poa mannii</i> )	Monocot	4	Endangered
Bluegrass, Napa	Monocot	3	Endangered
Bluegrass, San Bernardino	Monocot	6	Endangered
Blue-star, Kearney's	Dicot	2	Endangered
Bluet, Roan Mountain	Dicot	3	Endangered
Bonamia menziesii (ncn)	Dicot	15	Endangered
Boxwood, Vahl's	Dicot	3	Endangered
Broom, San Clemente Island	Dicot	4	Endangered
Buckwheat, Cushmanbury	Dicot	3	Endangered
Buckwheat, Ione (incl. Irish Hill)	Dicot	2	Endangered
Bulrush, Northeastern (=Barbed Bristle)	Monocot	18	Endangered
Bush-mallow, San Clemente Island	Dicot	4	Endangered
Bush-mallow, Santa Cruz Island	Dicot	4	Endangered
Button-celery, San Diego	Dicot	6	Endangered
Cactus, Arizona Hedgehog	Dicot	6	Endangered
Cactus, Bakersfield	Dicot	4	Endangered
Cactus, Black Lace	Dicot	3	Endangered
Cactus, Brady Pincushion	Dicot	1	Endangered
Cactus, Knowlton	Dicot	2	Endangered
Cactus, Kuenzler Hedgehog	Dicot	2	Endangered
Cactus, Nellie Cory	Dicot	1	Endangered
Cactus, Nichol's Turk's Head	Dicot	5	Endangered
Cactus, Pima Pineapple	Dicot	3	Endangered
Cactus, Sneed Pincushion	Dicot	3	Endangered

Cactus, Star	Dicot	7	Endangered
Cactus, Tobusch Fishhook	Dicot	5	Endangered
Cactus, Wright Fishhook	Dicot	2	Endangered
Calyptranthes Thomasiana (ncn)	Dicot	1	Endangered
Campeloma, Slender	Gastropod	1	Endangered
Campion, Fringed	Dicot	5	Endangered
Capa Rosa	Dicot	2	Endangered
Caribou, Woodland	Mammal	1	Endangered
Catesbeia Melanocarpa (ncn)	Dicot	1	Endangered
Cat's-eye, Terlingua Creek	Dicot	1	Endangered
Cavesnail, Tumbling Creek	Gastropod	1	Endangered
Ceanothus, Coyote	Dicot	2	Endangered
Ceanothus, Pine Hill	Dicot	3	Endangered
Chaffseed, American	Dicot	23	Endangered
Chamaecrista glandulosa (ncn)	Dicot	4	Endangered
Chamaesyce Halemanui (ncn)	Dicot	4	Endangered
Checker-mallow, Keck's	Dicot	8	Endangered
Checker-mallow, Kenwood Marsh	Dicot	2	Endangered
Checker-mallow, Pedate	Dicot	3	Endangered
Checker-mallow, Wenatchee Mountains	Dicot	1	Endangered
Chupacallos	Dicot	3	Endangered
Cladonia, Florida Perforate	Lichen	15	Endangered
Clarkia, Pismo	Dicot	3	Endangered
Clarkia, Presidio	Dicot	2	Endangered
Clarkia, Vine Hill	Dicot	2	Endangered
Cliffrose, Arizona	Dicot	9	Endangered
Clover, Leafy Prairie	Dicot	11	Endangered
Clover, Monterey	Dicot	4	Endangered
Clover, Running Buffalo	Dicot	50	Endangered
Clover, Showy Indian	Dicot	5	Endangered
Combshell, Southern (=Penitent mussel)	Bivalve	2	Endangered
Combshell, Upland	Bivalve	9	Endangered
Coneflower, Smooth	Dicot	40	Endangered
Coneflower, Tennessee Purple	Dicot	3	Endangered
Cordia bellonii (ncn)	Dicot	1	Endangered
Coyote-thistle, Loch Lomond	Dicot	1	Endangered
Cranichis Ricartii	Monocot	2	Endangered
Crayfish, Cave ( <i>Cambarus acutus</i> )	Crustacean	2	Endangered
Crayfish, Nashville	Crustacean	1	Endangered
Crayfish, Shasta	Crustacean	2	Endangered
Crownscale, San Jacinto Valley	Dicot	3	Endangered
Cyanea undulata (ncn)	Dicot	4	Endangered
Cypress, Santa Cruz	Conif/eycds	4	Endangered
Daisy, Willamette	Dicot	5	Endangered
Daphnopsis hellerana (ncn)	Dicot	2	Endangered
Dawn-flower, Texas Prairie (=Texas Bitterweed)	Dicot	2	Endangered
Deer, Columbian White-tailed	Mammal	8	Endangered
Delissea rhytidisperma (ncn)	Dicot	4	Endangered
Diellia erecta (ncn)	Ferns	11	Endangered
Diellia falcata (ncn)	Ferns	3	Endangered
Diellia pallida (ncn)	Ferns	4	Endangered
Diellia unisora (ncn)	Ferns	7	Endangered
Diplazium molokaiense (ncn)	Ferns	4	Endangered
Dogweed, Ashy	Dicot	3	Endangered
Dropwort, Canby's	Dicot	22	Endangered
Dubautia latifolia (ncn)	Dicot	4	Endangered
Dubautia pauciflora (ncn)	Dicot	4	Endangered

Dudleya, Santa Clara Valley	Dicot	16	Endangered
Elktoe, Appalachian	Bivalve	9	Endangered
Erubia	Dicot	1	Endangered
Eugenia Woodburyana	Dicot	3	Endangered
Evening-primrose, Antioch Dunes	Dicot	3	Endangered
Fairy Shrimp, Conservancy Fairy	Crustacean	19	Endangered
Fairy Shrimp, Longhorn	Crustacean	14	Endangered
Fairy Shrimp, Riverside	Crustacean	17	Endangered
Fairy Shrimp, San Diego	Crustacean	3	Endangered
Fanshell	Bivalve	50	Endangered
Fern, Adiantum vivesii	Ferns	1	Endangered
Fern, Elaphoglossum serpens	Ferns	1	Endangered
Fern, Pendant Kahi ( <i>Adenophorus periens</i> )	Ferns	12	Endangered
Fern, Thelypteris inabonensis	Ferns	2	Endangered
Fern, Thelypteris verecunda	Ferns	3	Endangered
Fern, Thelypteris yaucoensis	Ferns	2	Endangered
Ferret, Black-footed	Mammal	61	Endangered
Fiddleneck, Large-flowered	Dicot	7	Endangered
Flannelbush, Mexican	Dicot	3	Endangered
Flannelbush, Pine Hill	Dicot	3	Endangered
Fox, San Joaquin Kit	Mammal	51	Endangered
Fox, San Miguel Island	Mammal	4	Endangered
Fox, Santa Catalina Island	Mammal	4	Endangered
Fox, Santa Cruz Island	Mammal	4	Endangered
Fox, Santa Rosa Island	Mammal	4	Endangered
Frankenia, Johnston's	Dicot	3	Endangered
Fringe Tree, Pygmy	Dicot	13	Endangered
Fringepod, Santa Cruz Island	Dicot	4	Endangered
Fritillary, Gentner's	Monocot	2	Endangered
Gahnia Lanaiensis (ncn)	Monocot	4	Endangered
Geranium, Hawaiian Red-flowered	Dicot	4	Endangered
Gerardia, Sandplain	Dicot	7	Endangered
Gilia, Hoffmann's Slender-flowered	Dicot	4	Endangered
Gilia, Monterey	Dicot	4	Endangered
Goetzea, Beautiful (Matabuey)	Dicot	2	Endangered
Golden Sunburst, Hartweg's	Dicot	11	Endangered
Goldenrod, Short's	Dicot	6	Endangered
Goldfields, Burke's	Dicot	5	Endangered
Goldfields, Contra Costa	Dicot	21	Endangered
Gouania hillebrandii (ncn)	Dicot	4	Endangered
Gouania meyenii (ncn)	Dicot	7	Endangered
Gouania vitifolia (ncn)	Dicot	3	Endangered
Gourd, Okeechobee	Dicot	5	Endangered
Grass, California Orcutt	Monocot	10	Endangered
Grass, Fosberg's Love	Monocot	3	Endangered
Grass, Hairy Orcutt	Dicot	27	Endangered
Grass, Sacramento Orcutt	Dicot	4	Endangered
Grass, Solano	Monocot	6	Endangered
Grass, Tennessee Yellow-eyed	Monocot	3	Endangered
Ground-plum, Guthrie's	Dicot	2	Endangered
haha	Dicot	8	Endangered
Haha ( <i>Cyanea acuminata</i> )	Dicot	3	Endangered
Haha ( <i>Cyanea asarifolia</i> )	Dicot	4	Endangered
Haha ( <i>Cyanea copelandii</i> ssp. <i>copelandii</i> )	Dicot	4	Endangered
Haha ( <i>Cyanea copelandii</i> ssp. <i>haleakalaensis</i> )	Dicot	4	Endangered
Haha ( <i>Cyanea Crispa</i> ) (= <i>Rollandia crispa</i> )	Dicot	3	Endangered
Haha ( <i>Cyanea dunbarii</i> )	Dicot	4	Endangered

Haha (Cyanea glabra)	Dicot	4	Endangered
Haha (Cyanea grimesiana ssp. grimesiana)	Dicot	7	Endangered
Haha (Cyanea grimesiana ssp. obatae)	Dicot	3	Endangered
Haha (Cyanea hamatiflora ssp. carlsonii)	Dicot	4	Endangered
Haha (Cyanea hamatiflora ssp. hamatiflora)	Dicot	4	Endangered
Haha (Cyanea humboldtiana)	Dicot	3	Endangered
Haha (Cyanea koolauensis)	Dicot	3	Endangered
Haha (Cyanea longiflora)	Dicot	3	Endangered
Haha (Cyanea Macrostegia var. gibsonii)	Dicot	4	Endangered
Haha (Cyanea mannii)	Dicot	4	Endangered
Haha (Cyanea mceldowneyi)	Dicot	4	Endangered
Haha (Cyanea pinnatifida)	Dicot	3	Endangered
Haha (Cyanea platyphylla)	Dicot	4	Endangered
Haha (Cyanea procera)	Dicot	4	Endangered
Haha (Cyanea remyi)	Dicot	4	Endangered
Haha (Cyanea shipmanii)	Dicot	4	Endangered
Haha (Cyanea stictophylla)	Dicot	4	Endangered
Haha (Cyanea St-Johnii) (=Rollandia St-Johnii)	Dicot	3	Endangered
Haha (Cyanea superba)	Dicot	3	Endangered
Ha'Iwale (Cyrtandra crenata)	Dicot	3	Endangered
Ha'Iwale (Cyrtandra dentata)	Dicot	3	Endangered
Ha'Iwale (Cyrtandra giffardii)	Dicot	4	Endangered
Ha'Iwale (Cyrtandra munroi)	Dicot	4	Endangered
Ha'Iwale (Cyrtandra polyantha)	Dicot	3	Endangered
Ha'Iwale (Cyrtandra subumbellata)	Dicot	3	Endangered
Ha'Iwale (Cyrtandra tintinnabula)	Dicot	3	Endangered
Ha'Iwale (Cyrtandra viridiflora)	Dicot	3	Endangered
Hala Pepe (Pleomele hawaiiensis)	Monocot	4	Endangered
Haplostachys Haplostachya (ncn)	Dicot	4	Endangered
Harebells, Avon Park	Dicot	6	Endangered
Harperella	Dicot	20	Endangered
Hau Kauhiwi (Hibiscadelphus woodi)	Dicot	4	Endangered
Hau Kuahiwi (Hibiscadelphus distans)	Dicot	4	Endangered
Heau (Exocarpos luteolus)	Dicot	4	Endangered
Hedyotis degeneri (ncn)	Dicot	3	Endangered
Hedyotis parvula (ncn)	Dicot	3	Endangered
Hedyotis St.-Johnii (ncn)	Dicot	4	Endangered
Hesperomannia arborescens (ncn)	Dicot	7	Endangered
Hesperomannia arbuscula (ncn)	Dicot	7	Endangered
Hesperomannia lydgatei (ncn)	Dicot	4	Endangered
Hibiscus, Clay's	Dicot	4	Endangered
Higuero De Sierra	Dicot	4	Endangered
Hiiwale	Dicot	4	Endangered
Hilo Ischaemum (Ischaemum byrone)	Monocot	12	Endangered
ho'awa	Dicot	4	Endangered
Holei (Ochrosia kilaueaensis)	Dicot	4	Endangered
Holly, Cook's	Dicot	2	Endangered
Hypericum, Highlands Scrub	Dicot	6	Endangered
'Ihi'ihi (Marsilea villosa)	Ferns	7	Endangered
Ilex sintenisii (ncn)	Dicot	2	Endangered
Iliau (Wilkesia hobdyi)	Dicot	4	Endangered
Ipomopsis, Holy Ghost	Dicot	1	Endangered
frisette, White	Monocot	4	Endangered
Isopod, Lee County Cave	Crustacean	1	Endangered
Isopod, Socorro	Crustacean	1	Endangered
Jacquemontia, Beach	Dicot	9	Endangered
Jaguar	Mammal	10	Endangered

Jaguarundi, Gulf Coast	Mammal	19	Endangered
Jaguarundi, Sinaloan	Mammal	15	Endangered
Jewelflower, California	Dicot	22	Endangered
Jewelflower, Tiburon	Dicot	3	Endangered
kamakahala	Dicot	8	Endangered
Kamakahala ( <i>Labordia cyrtandrae</i> )	Dicot	3	Endangered
Kamakahala ( <i>Labordia lydgatei</i> )	Dicot	4	Endangered
Kamakahala ( <i>Labordia tinifolia</i> var. <i>lanaiensis</i> )	Dicot	4	Endangered
Kamakahala ( <i>Labordia tinifolia</i> var. <i>wahiawaen</i> )	Dicot	4	Endangered
Kamakahala ( <i>Labordia triflora</i> )	Dicot	4	Endangered
Kamanomano ( <i>Cenchrus agrimonoides</i> )	Monocot	7	Endangered
Kanaloa kahoolawensis (ncn)	Dicot	4	Endangered
Kangaroo Rat, Fresno	Mammal	13	Endangered
Kangaroo Rat, Giant	Mammal	32	Endangered
Kangaroo Rat, Morro Bay	Mammal	3	Endangered
Kangaroo Rat, San Bernardino Merriam's	Mammal	6	Endangered
Kangaroo Rat, Stephens'	Mammal	9	Endangered
Kangaroo Rat, Tipton	Mammal	11	Endangered
Kauila ( <i>Colubrina oppositifolia</i> )	Dicot	4	Endangered
Kaulu ( <i>Pteralyxia kauaiensis</i> )	Dicot	4	Endangered
Kidneyshell, Triangular	Bivalve	16	Endangered
Kio'Ele ( <i>Hedyotis coriacea</i> )	Dicot	8	Endangered
Kiponapona ( <i>Phyllostegia racemosa</i> )	Dicot	4	Endangered
Koki'o ( <i>Kokia drynarioides</i> )	Dicot	4	Endangered
Koki'o ( <i>Kokia kauaiensis</i> )	Dicot	4	Endangered
Koki'o Ke'oke'o ( <i>Hibiscus arnottianus</i> ssp. <i>immaculatus</i> )	Dicot	4	Endangered
Koki'o Ke'oke'o ( <i>Hibiscus waimeae</i> ssp. <i>hannerae</i> )	Dicot	4	Endangered
kolea	Dicot	4	Endangered
Kolea ( <i>Myrsine judii</i> )	Dicot	3	Endangered
Ko'oko'olau ( <i>Bidens micrantha</i> ssp. <i>kalealaha</i> )	Dicot	4	Endangered
Ko'oko'olau ( <i>Bidens wiebkei</i> )	Dicot	4	Endangered
Ko'oloa'ula ( <i>Abutilon menziesii</i> )	Dicot	8	Endangered
Kopa ( <i>Hedyotis schlechtendahliana</i> var. <i>remyi</i> )	Dicot	4	Endangered
kopiko	Dicot	8	Endangered
Kuawaawaehu ( <i>Alsinidendron lychnoides</i> )	Dicot	4	Endangered
Kulu'l ( <i>Nototrichium humile</i> )	Dicot	7	Endangered
Ladies'-tresses, Canelo Hills	Monocot	2	Endangered
Ladies'-tresses, Navasota	Monocot	9	Endangered
Larkspur, Baker's	Dicot	5	Endangered
Larkspur, San Clemente Island	Dicot	4	Endangered
Larkspur, Yellow	Dicot	5	Endangered
Lau'ehu ( <i>Panicum niihauense</i> )	Monocot	4	Endangered
Laukahī Kuahīwi ( <i>Plantago hawaiensis</i> )	Dicot	4	Endangered
Laukahī Kuahīwi ( <i>Plantago princeps</i> )	Dicot	11	Endangered
Laulihilihi ( <i>Schiadea stellaroides</i> )	Dicot	4	Endangered
Layia, Beach	Dicot	12	Endangered
Lead-plant, Crenulate	Dicot	3	Endangered
Leather-flower, Alabama	Dicot	3	Endangered
Leather-flower, Morefield's	Dicot	1	Endangered
Iehua makaneo	Dicot	4	Endangered
Lepanthes eltoensis (ncn)	Monocot	2	Endangered
Lessingia, San Francisco	Dicot	1	Endangered
Lichen, Rock Gnome	Lichen	10	Endangered
Lily, Minnesota Trout	Monocot	3	Endangered
Lily, Pitkin Marsh	Monocot	2	Endangered
Lily, Western	Monocot	2	Endangered
Limpet, Banbury Springs	Gastropod	4	Endangered

Lipochaeta venosa (ncn)	Dicot	4	Endangered
Liveforever, Santa Barbara Island lo`ulu	Dicot	4	Endangered
Lo`ulu (Pritchardia affinis)	Monocot	4	Endangered
Lo`ulu (Pritchardia kaalae)	Monocot	4	Endangered
Lo`ulu (Pritchardia munroi)	Monocot	3	Endangered
Lo`ulu (Pritchardia napaliensis)	Monocot	4	Endangered
Lo`ulu (Pritchardia remota)	Monocot	3	Endangered
Lo`ulu (Pritchardia schattaueri)	Monocot	4	Endangered
Lo`ulu (Pritchardia viscosa)	Monocot	4	Endangered
Lobelia monostachya (ncn)	Dicot	3	Endangered
Lobelia niihauensis (ncn)	Dicot	7	Endangered
Lobelia oahuensis (ncn)	Dicot	3	Endangered
Lomatium, Bradshaw's	Dicot	5	Endangered
Lomatium, Cook's	Dicot	2	Endangered
Loosestrife, Rough-leaved	Dicot	20	Endangered
Lousewort, Furbish	Dicot	1	Endangered
Lupine, Clover	Dicot	12	Endangered
Lupine, Nipomo Mesa	Dicot	3	Endangered
Lupine, Scrub	Dicot	7	Endangered
Lyonia truncata var. proctorii (ncn)	Dicot	2	Endangered
Lysimachia filifolia (ncn)	Dicot	7	Endangered
Lysimachia lydgatei (ncn)	Dicot	7	Endangered
Lysimachia maxima (ncn)	Dicot	4	Endangered
Mahoe (Alectryon macrococcus)	Dicot	11	Endangered
Malacothrix, Island	Dicot	4	Endangered
Malacothrix, Santa Cruz Island	Dicot	8	Endangered
Mallow, Kern	Dicot	4	Endangered
Manioc, Walker's	Dicot	4	Endangered
Manzanita, Del Mar	Dicot	6	Endangered
Manzanita, Santa Rosa Island	Dicot	4	Endangered
Ma'o Hau Hele (Hibiscus brackenridgei)	Dicot	11	Endangered
Ma'oli'oli (Schiedea apokremnos)	Dicot	4	Endangered
Ma'oli'oli (Schiedea kealiae)	Dicot	3	Endangered
Mapele (Cyrtandra cyaneoides)	Dicot	4	Endangered
Mariscus fauriei (ncn)	Monocot	8	Endangered
Mariscus pennatiflorus (ncn)	Monocot	15	Endangered
Marstonia, Royal (=Royal Snail)	Gastropod	1	Endangered
Meadowfoam, Butte County	Dicot	6	Endangered
Meadowfoam, Large-flowered Woolly	Dicot	1	Endangered
Meadowfoam, Sebastopol	Dicot	2	Endangered
Meadow Rue, Cooley's	Dicot	7	Endangered
Mehamehame (Flueggea neowawraea)	Dicot	15	Endangered
Milkpea, Small's	Dicot	3	Endangered
Milk-vetch, Braunton's	Dicot	11	Endangered
Milk-vetch, Clara Hunt's	Dicot	5	Endangered
Milk-vetch, Coachella Valley	Dicot	3	Endangered
Milk-vetch, Coastal Dunes	Dicot	4	Endangered
Milk-vetch, Cushenbury	Dicot	3	Endangered
Milk-vetch, Holmgren	Dicot	3	Endangered
Milk-vetch, Lane Mountain	Dicot	3	Endangered
Milk-vetch, Mancos	Dicot	2	Endangered
Milk-vetch, Sentry	Dicot	1	Endangered
Milk-vetch, Shiwuits	Dicot	1	Endangered
Milk-vetch, Triple-ribbed	Dicot	6	Endangered
Milk-vetch, Ventura Marsh	Dicot	8	Endangered
Mint, Garrett's	Dicot	2	Endangered

Mint, Lakela's	Dicot	6	Endangered
Mint, Longspurred	Dicot	4	Endangered
Mint, Otay Mesa	Dicot	6	Endangered
Mint, San Diego Mesa	Dicot	3	Endangered
Mint, Scrub	Dicot	2	Endangered
Mitracarpus Maxwelliae	Dicot	2	Endangered
Mitracarpus Polycladus	Dicot	2	Endangered
Monardella, Willowy	Dicot	3	Endangered
Monkey-flower, Michigan	Dicot	6	Endangered
Morning-glory, Stebbins	Dicot	3	Endangered
Mountain Beaver, Point Arena	Mammal	2	Endangered
Mountainbalm, Indian Knob	Dicot	3	Endangered
Mountain-mahogany, Catalina Island	Dicot	4	Endangered
Mouse, Alabama Beach	Mammal	1	Endangered
Mouse, Anastasia Island Beach	Mammal	1	Endangered
Mouse, Choctawhatchee Beach	Mammal	3	Endangered
Mouse, Pacific Pocket	Mammal	10	Endangered
Mouse, Perdido Key Beach	Mammal	2	Endangered
Mouse, Salt Marsh Harvest	Mammal	17	Endangered
Mucket, Pink (Pearlymussel)	Bivalve	89	Endangered
Munroidendron racemosum (ncn)	Dicot	4	Endangered
Mussel, Acornshell Southern	Bivalve	4	Endangered
Mussel, Black (=Curtis' Mussel) Clubshell	Bivalve	1	Endangered
Mussel, Clubshell	Bivalve	54	Endangered
Mussel, Coosa Moccasinshell	Bivalve	8	Endangered
Mussel, Cumberland Combshell	Bivalve	14	Endangered
Mussel, Cumberland Elktoe	Bivalve	5	Endangered
Mussel, Cumberland Pigtoe	Bivalve	2	Endangered
Mussel, Dark Pigtoe	Bivalve	4	Endangered
Mussel, Dwarf Wedge	Bivalve	42	Endangered
Mussel, Fine-rayed Pigtoe	Bivalve	24	Endangered
Mussel, Gulf Moccasinshell	Bivalve	15	Endangered
Mussel, Heavy Pigtoe (=Judge Tait's Mussel)	Bivalve	4	Endangered
Mussel, Heelsplitter Carolina	Bivalve	10	Endangered
Mussel, Ochlockonee Moccasinshell	Bivalve	4	Endangered
Mussel, Oval Pigtoe	Bivalve	22	Endangered
Mussel, Ovate Clubshell	Bivalve	16	Endangered
Mussel, Oyster	Bivalve	15	Endangered
Mussel, Ring Pink (=Golf Stick Pearly)	Bivalve	33	Endangered
Mussel, Rough Pigtoe	Bivalve	43	Endangered
Mussel, Scaleshell	Bivalve	18	Endangered
Mussel, Shiny Pigtoe	Bivalve	18	Endangered
Mussel, Shiny-rayed Pocketbook	Bivalve	17	Endangered
Mussel, Southern Clubshell	Bivalve	15	Endangered
Mussel, Southern Pigtoe	Bivalve	10	Endangered
Mussel, Speckled Pocketbook	Bivalve	1	Endangered
Mussel, Winged Mapleleaf	Bivalve	8	Endangered
Mustard, Carter's	Dicot	9	Endangered
Mustard, Slender-petaled	Dicot	3	Endangered
Myrcia Paganii	Dicot	3	Endangered
na`ena`e	Dicot	20	Endangered
Na`ena`e (Dubautilia herbstobatae)	Dicot	3	Endangered
Na`ena`e (Dubautilia plantaginea ssp. humilis)	Dicot	4	Endangered
Nani Wai'ale'ale (Viola kauaensis var. wahiawaensis)	Dicot	4	Endangered
Nanu (Gardenia mannii)	Dicot	3	Endangered
Na'u (Gardenia brighamii)	Dicot	7	Endangered
Naupaka, Dwarf (Scaevola coriacea)	Dicot	4	Endangered

Navarretia, Few-flowered	Dicot	17	Endangered
Navarretia, Many-flowered	Dicot	17	Endangered
Nehe ( <i>Lipochaeta fauriei</i> )	Dicot	4	Endangered
Nehe ( <i>Lipochaeta kamolensis</i> )	Dicot	4	Endangered
Nehe ( <i>Lipochaeta lobata</i> var. <i>leptophylla</i> )	Dicot	3	Endangered
Nehe ( <i>Lipochaeta micrantha</i> )	Dicot	4	Endangered
Nehe ( <i>Lipochaeta tenuifolia</i> )	Dicot	3	Endangered
Nehe ( <i>Lipochaeta waimeaeensis</i> )	Dicot	4	Endangered
Neraudia angulata (ncn)	Dicot	3	Endangered
Neraudia ovata (ncn)	Dicot	4	Endangered
Neraudia sericea (ncn)	Dicot	8	Endangered
Nioi ( <i>Eugenia koolauensis</i> )	Dicot	3	Endangered
Niterwort, Amargosa	Dicot	1	Endangered
nohoanu	Dicot	4	Endangered
Nohoanu ( <i>Geranium multiflorum</i> )	Dicot	8	Endangered
Ocelot	Mammal	25	Endangered
'Oha ( <i>Delissea rivularis</i> )	Dicot	4	Endangered
'Oha ( <i>Delissea subcordata</i> )	Dicot	3	Endangered
'Oha ( <i>Delissea undulata</i> )	Dicot	4	Endangered
'Oha ( <i>Lobelia gaudichaudii</i> koolauensis)	Dicot	3	Endangered
'Oha Wai ( <i>Clermontia drepanomorpha</i> )	Dicot	4	Endangered
'Oha Wai ( <i>Clermontia lindseyana</i> )	Dicot	8	Endangered
'Oha Wai ( <i>Clermontia oblongifolia</i> ssp. <i>brevipes</i> )	Dicot	4	Endangered
'Oha Wai ( <i>Clermontia oblongifolia</i> ssp. <i>mauiensis</i> )	Dicot	4	Endangered
'Oha Wai ( <i>Clermontia peleana</i> )	Dicot	4	Endangered
'Oha Wai ( <i>Clermontia pyrularia</i> )	Dicot	4	Endangered
'Oha Wai ( <i>Clermontia samuelii</i> )	Dicot	4	Endangered
'Ohai ( <i>Sesbania tomentosa</i> )	Dicot	15	Endangered
'Ohe'ohe ( <i>Tetraplasandra gymnocarpa</i> )	Dicot	3	Endangered
'Olulu ( <i>Brighamia insignis</i> )	Dicot	4	Endangered
Onion, Munz's	Monocot	3	Endangered
Opuhe ( <i>Urera kaalae</i> )	Dicot	3	Endangered
Oxytheca, Cushenbury	Dicot	3	Endangered
Pa'inu	Monocot	8	Endangered
Paintbrush, San Clemente Island Indian	Dicot	4	Endangered
Paintbrush, Soft-leaved	Dicot	4	Endangered
Paintbrush, Tiburon	Dicot	8	Endangered
Palo Colorado ( <i>Ternstroemia luquillensis</i> )	Dicot	2	Endangered
Palo de Jazmin	Dicot	1	Endangered
Palo de Nigua	Dicot	6	Endangered
Palo de Ramon	Dicot	1	Endangered
Palo de Rosa	Dicot	4	Endangered
Pamakani ( <i>Viola chamissoniana</i> ssp. <i>chamissoniana</i> )	Dicot	3	Endangered
Panicgrass, Carter's ( <i>Panicum fauriei</i> var. <i>carteri</i> )	Monocot	7	Endangered
Panther, Florida	Mammal	27	Endangered
Papaia	Dicot	4	Endangered
Pauoa ( <i>Ctenitis squamigera</i> )	Ferns	7	Endangered
Pawpaw, Beautiful	Dicot	8	Endangered
Pawpaw, Four-petal	Dicot	9	Endangered
Pawpaw, Rugei's	Dicot	2	Endangered
Pearlymussel, Alabama Lamp	Bivalve	5	Endangered
Pearlymussel, Appalachian Monkeyface	Bivalve	8	Endangered
Pearlymussel, Birdwing	Bivalve	18	Endangered
Pearlymussel, Cracking	Bivalve	18	Endangered
Pearlymussel, Cumberland Bean	Bivalve	18	Endangered
Pearlymussel, Cumberland Monkeyface	Bivalve	17	Endangered
Pearlymussel, Curtis'	Bivalve	2	Endangered

Pearlymussel, Dromedary	Bivalve	21	Endangered
Pearlymussel, Fat Pocketbook	Bivalve	30	Endangered
Pearlymussel, Green-blossom	Bivalve	10	Endangered
Pearlymussel, Higgins' Eye	Bivalve	35	Endangered
Pearlymussel, Little-wing	Bivalve	18	Endangered
Pearlymussel, Orange-footed	Bivalve	37	Endangered
Pearlymussel, Pale Lilliput	Bivalve	8	Endangered
Pearlymussel, Purple Cat's Paw	Bivalve	10	Endangered
Pearlymussel, Tuberclad-blossom	Bivalve	29	Endangered
Pearlymussel, Turgid-blossom	Bivalve	10	Endangered
Pearlymussel, White Cat's Paw	Bivalve	3	Endangered
Pearlymussel, White Wartyback	Bivalve	22	Endangered
Pearlymussel, Yellow-blossom	Bivalve	17	Endangered
Pebblesnail, Flat	Gastropod	1	Endangered
Pelos del Diablo	Monocot	4	Endangered
Penny-cress, Kneeland Prairie	Dicot	1	Endangered
Pennyroyal, Todsen's	Dicot	2	Endangered
Penstemon, Blowout	Dicot	6	Endangered
Pentachaeta, Lyon's	Dicot	8	Endangered
Pentachaeta, White-rayed	Dicot	7	Endangered
Peperomia, Wheeler's	Dicot	1	Endangered
Phacelia, Clay	Dicot	1	Endangered
Phacelia, Island	Dicot	4	Endangered
Phlox, Texas Trailing	Dicot	3	Endangered
Phlox, Yreka	Dicot	1	Endangered
Phyllostegia hirsuta (ncn)	Dicot	3	Endangered
Phyllostegia kaalaensis (ncn)	Dicot	3	Endangered
Phyllostegia knudsenii (ncn)	Dicot	4	Endangered
Phyllostegia manni (ncn)	Dicot	4	Endangered
Phyllostegia mollis (ncn)	Dicot	7	Endangered
Phyllostegia parviflora (ncn)	Dicot	3	Endangered
Phyllostegia velutina (ncn)	Dicot	4	Endangered
Phyllostegia waimeae (ncn)	Dicot	4	Endangered
Phyllostegia warshaweri (ncn)	Dicot	4	Endangered
Phyllostegia wawrana (ncn)	Dicot	4	Endangered
Pilo (Hedyotis manni)	Dicot	4	Endangered
pilo kea lau li'i	Dicot	4	Endangered
Pinkroot, Gentian	Dicot	3	Endangered
Piperia, Yadon's	Monocot	4	Endangered
Pitaya, Davis' Green	Dicot	1	Endangered
Pitcher-plant, Alabama Canebrake	Dicot	3	Endangered
Pitcher-plant, Green	Dicot	9	Endangered
Pitcher-plant, Mountain Sweet	Dicot	3	Endangered
Platanthera holochila (ncn)	Monocot	8	Endangered
Plum, Scrub	Dicot	11	Endangered
Poa siphonoglossa (ncn)	Monocot	4	Endangered
Po'e (Portulaca sclerocarpa)	Dicot	8	Endangered
Polygala, Lewton's	Dicot	15	Endangered
Polygala, Tiny	Dicot	14	Endangered
Polygonum, Scott's Valley	Dicot	3	Endangered
Polystichum calderonense (ncn)	Ferns	1	Endangered
Pondberry	Dicot	16	Endangered
Pondweed, Little Aguja Creek	Monocot	1	Endangered
Popcornflower, Rough	Dicot	1	Endangered
Popolo 'Aiakeakua ( <i>Solanum sandwicense</i> )	Dicot	7	Endangered
Popolo Ku Mai ( <i>Solanum incompletum</i> )	Dicot	4	Endangered
Poppy, Sacramento Prickly	Dicot	1	Endangered

Poppy-mallow, Texas	Dicot	1	Endangered
Potentilla, Hickman's	Dicot	5	Endangered
Prickly-apple, Fragrant	Dicot	2	Endangered
Prickly-ash, St. Thomas	Dicot	2	Endangered
Pronghorn, Sonoran	Mammal	8	Endangered
Pteris lidgatei (ncn)	Ferns	7	Endangered
Pua'ala (Brighamia rockii)	Dicot	4	Endangered
Purple Bean	Bivalve	9	Endangered
Pu'u'ka'a (Cyperus trachysanthos)	Monocot	7	Endangered
Quillwort, Black-spored	Ferns	6	Endangered
Quillwort, Louisiana	Ferns	17	Endangered
Quillwort, Mat-forming	Ferns	4	Endangered
Rabbit, Pygmy	Mammal	6	Endangered
Rabbit, Riparian Brush	Mammal	4	Endangered
Rabbitsfoot, Rough	Bivalve	6	Endangered
Rattleweed, Hairy	Dicot	2	Endangered
Reed-mustard, Shubby	Dicot	1	Endangered
Remya kauaiensis (ncn)	Dicot	4	Endangered
Remya montgomeryi (ncn)	Dicot	4	Endangered
Remya, Maui	Dicot	4	Endangered
Rhododendron, Chapman	Dicot	3	Endangered
Ridge-cress (=Pepper-cress), Barneby	Dicot	1	Endangered
Rifflershell, Northern	Bivalve	26	Endangered
Rifflershell, Tan	Bivalve	23	Endangered
Riversnail, Anthony's	Gastropod	7	Endangered
Rock-cress, Hoffmann's	Dicot	4	Endangered
Rock-cress, Large (=Braun's)	Dicot	6	Endangered
Rock-cress, McDonald's	Dicot	2	Endangered
Rock-cress, Santa Cruz Island	Dicot	4	Endangered
Rock-cress, Shale Barren	Dicot	8	Endangered
Rock-cress, Small	Dicot	4	Endangered
Rock-pocketbook, Ouachita (=Wheeler's pm)	Bivalve	5	Endangered
Rocksnail, Plicate	Gastropod	2	Endangered
Rosemary, Etonia	Dicot	3	Endangered
Rosemary, Short-leaved	Dicot	6	Endangered
Sandalwood, Lanai (=Iliahi)	Dicot	4	Endangered
Sandlace	Dicot	12	Endangered
Sand-verbena, Large-fruited	Dicot	2	Endangered
Sandwort, Cumberland	Dicot	3	Endangered
Sandwort, Marsh	Dicot	3	Endangered
Sanicula mariversa (ncn)	Dicot	3	Endangered
Sanicula purpurea (ncn)	Dicot	4	Endangered
Schiedea haleakalensis (ncn)	Dicot	4	Endangered
Schiedea helleri (ncn)	Dicot	4	Endangered
Schiedea hookeri (ncn)	Dicot	3	Endangered
Schiedea kaalae (ncn)	Dicot	3	Endangered
Schiedea kauaiensis (ncn)	Dicot	4	Endangered
Schiedea lydgatei (ncn)	Dicot	4	Endangered
Schiedea membranacea (ncn)	Dicot	4	Endangered
Schiedea nuttallii (ncn)	Dicot	7	Endangered
Schiedea sarmentosa (ncn)	Dicot	4	Endangered
Schiedea spergulina var. leiopoda (ncn)	Dicot	4	Endangered
Schiedea verticillata (ncn)	Dicot	3	Endangered
Schiedea, Diamond Head (Schiedea adamantis)	Dicot	3	Endangered
Sea-blite, California	Dicot	3	Endangered
Sedge, Golden	Monocot	2	Endangered
Sedge, White	Monocot	2	Endangered

Sheep, Peninsular Bighorn	Mammal	11	Endangered
Sheep, Sierra Nevada Bighorn	Mammal	5	Endangered
Shrew, Buena Vista Lake Ornate	Mammal	4	Endangered
Shrimp, Alabama Cave	Crustacean	1	Endangered
Shrimp, California Freshwater	Crustacean	8	Endangered
Shrimp, Kentucky Cave	Crustacean	2	Endangered
Silene alexandri (ncn)	Dicot	4	Endangered
Silene lanceolata (ncn)	Dicot	15	Endangered
Silene perlmanii (ncn)	Dicot	3	Endangered
Silversword, Ka'u ( <i>Argyroxiphium kauense</i> )	Dicot	4	Endangered
Silversword, Mauna Kea ('Ahihahina)	Dicot	8	Endangered
Snail, Armored	Gastropod	1	Endangered
Snail, Iowa Pleistocene	Gastropod	7	Endangered
Snail, Lioplax Cylindrical	Gastropod	1	Endangered
Snail, Morro Shoulderband	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella abbreviata</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella apexfulva</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella bellula</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella buddii</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella bulimooides</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella byronii</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella caesia</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella casta</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella cestus</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella concavospira</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella curta</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella decipiens</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella decora</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella dimorpha</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella elegans</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella fulgens</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella fuscobasis</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella juddii</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella juncea</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella lehuiensis</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella leucoraphe</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella lila</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella livida</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella lorata</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella mustelina</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella papyracea</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella phaeozona</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella pulcherrima</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella pupukanioe</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella rosea</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella sowerbyana</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella spaldingi</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella stewartii</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella swiftii</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella taeniolata</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella thaanumi</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella turgida</i> )	Gastropod	3	Endangered
Snail, O'ahu Tree ( <i>Achatinella valida</i> )	Gastropod	3	Endangered
Snail, Pecos Assiminea	Gastropod	1	Endangered
Snail, Snake River Physa	Gastropod	8	Endangered
Snail, Tulotoma	Gastropod	6	Endangered
Snail, Utah Valvata	Gastropod	6	Endangered

Snail, Virginia Fringed Mountain	Gastropod	1	Endangered
Snakeroot	Dicot	8	Endangered
Snowbells, Texas	Dicot	5	Endangered
Spermolepis hawaiiensis (ncn)	Dicot	15	Endangered
Spineflower, Ben Lomond	Dicot	3	Endangered
Spineflower, Howell's	Dicot	2	Endangered
Spineflower, Orcutt's	Dicot	6	Endangered
Spineflower, Robust	Dicot	7	Endangered
Spineflower, Scotts Valley	Dicot	3	Endangered
Spineflower, Slender-horned	Dicot	13	Endangered
Spineflower, Sonoma	Dicot	5	Endangered
Spinymussel, James River	Bivalve	14	Endangered
Spinymussel, Tar River	Bivalve	6	Endangered
Springsnail, Alamosa	Gastropod	1	Endangered
Springsnail, Bruneau Hot	Gastropod	2	Endangered
Springsnail, Socorro	Gastropod	1	Endangered
Spurge, Deltoid	Dicot	3	Endangered
Squirrel, Carolina Northern Flying	Mammal	11	Endangered
Squirrel, Delmarva Peninsula Fox	Mammal	11	Endangered
Squirrel, Mount Graham Red	Mammal	2	Endangered
Stenogyne angustifolia (ncn)	Dicot	4	Endangered
Stenogyne bifida (ncn)	Dicot	4	Endangered
Stenogyne campanulata (ncn)	Dicot	4	Endangered
Stenogyne kanehoana (ncn)	Dicot	3	Endangered
Stickseed, Showy	Dicot	1	Endangered
Stickyseed, Baker's	Dicot	2	Endangered
Stirrupshell	Bivalve	2	Endangered
Stonecrop, Lake County	Dicot	17	Endangered
Sumac, Michaux's	Dicot	27	Endangered
Sunflower, San Mateo Woolly	Dicot	1	Endangered
Sunflower, Schweinitz's	Dicot	16	Endangered
Tadpole Shrimp, Vernal Pool	Crustacean	63	Endangered
Taraxacum, California	Dicot	3	Endangered
Tarplant, Gaviota	Dicot	4	Endangered
Tectaria Estremeriana	Ferns	1	Endangered
Ternstroemia subsessilis (ncn)	Dicot	1	Endangered
Tetramolopium arenarium (ncn)	Dicot	4	Endangered
Tetramolopium capillare (ncn)	Dicot	4	Endangered
Tetramolopium filiforme (ncn)	Dicot	3	Endangered
Tetramolopium lepidotum ssp. lepidotum (ncn)	Dicot	3	Endangered
Tetramolopium remyi (ncn)	Dicot	4	Endangered
Thistle, Chorro creek Bog	Dicot	3	Endangered
Thistle, Fountain	Dicot	7	Endangered
Thistle, La Graciosa	Dicot	7	Endangered
Thistle, Suisun	Dicot	3	Endangered
Thormint, San Mateo	Dicot	1	Endangered
Threeridge, Fat (Mussel)	Bivalve	4	Endangered
Torreya, Florida	Conf/cycds	4	Endangered
Tree Fern, Elfin	Ferns	1	Endangered
Trematolobelia singularis (ncn)	Dicot	3	Endangered
Trillium, Persistent	Monocot	3	Endangered
Trillium, Relict	Monocot	11	Endangered
Tuctoria, Green's	Dicot	26	Endangered
Uhiuhi ( <i>Caesalpinia kavaiensis</i> )	Dicot	11	Endangered
Ulihi ( <i>Phyllostegia glabra</i> var. <i>lanaiensis</i> )	Dicot	4	Endangered
Umbel, Huachuca Water	Dicot	4	Endangered
Uvillo	Dicot	3	Endangered

Vernonia Proctorii (ncn)	Dicot	2	Endangered
Vetch, Hawaiian ( <i>Vicia menziesii</i> )	Dicot	4	Endangered
Vigna o-wahuensis (ncn)	Dicot	12	Endangered
Viola heleneae (ncn)	Dicot	4	Endangered
Viola lanaiensis (ncn)	Dicot	4	Endangered
Viola oahuensis (ncn)	Dicot	3	Endangered
Vole, Amargosa	Mammal	3	Endangered
Vole, Florida Salt Marsh	Mammal	1	Endangered
Vole, Hualapai Mexican	Mammal	3	Endangered
Wahane ( <i>Pritchardia aylmer-robinsonii</i> )	Monocot	4	Endangered
Wahine Noho Kula ( <i>Isodendrion pyrifolium</i> )	Dicot	4	Endangered
Wallflower, Ben Lomond	Dicot	3	Endangered
Wallflower, Contra Costa	Dicot	1	Endangered
Wallflower, Menzie's	Dicot	8	Endangered
Walnut, Nogal	Dicot	1	Endangered
Warea, Wide-leaf	Dicot	9	Endangered
Watercress, Gambel's	Dicot	17	Endangered
Water-willow, Cooley's	Dicot	3	Endangered
Wawa'e'ole ( <i>Phlegmariurus (=Huperzia) mannii</i> )	Ferns	8	Endangered
Wawa'e'ole ( <i>Phlegmariurus (=Lycopodium) nutans</i> )	Ferns	3	Endangered
Wild-buckwheat, Clay-loving	Dicot	2	Endangered
Wild-rice, Texas	Monocot	5	Endangered
Wireweed	Dicot	6	Endangered
Woodland-star, San Clemente Island	Dicot	4	Endangered
Woodrat, Riparian	Mammal	4	Endangered
Woolly-star, Santa Ana River	Dicot	9	Endangered
Woolly-threads, San Joaquin	Dicot	25	Endangered
Xylosma crenatum (ncn)	Dicot	4	Endangered
Yerba Santa, Lompoc	Dicot	4	Endangered
Ziziphus, Florida	Dicot	6	Endangered
Adobe Sunburst, San Joaquin	Dicot	11	Threatened
Amaranth, Seabeach	Dicot	13	Threatened
Amole, Cammatta Canyon	Monocot	3	Threatened
Amole, Purple	Monocot	7	Threatened
Amphianthus, Little	Dicot	17	Threatened
Aster, Decurrent False	Dicot	20	Threatened
Aupaka ( <i>Isodendrion longifolium</i> )	Dicot	7	Threatened
Baccharis, Encinitas	Dicot	6	Threatened
Bankclimber, Purple	Bivalve	14	Threatened
Barbara Buttons, Mohr's	Dicot	6	Threatened
Beaked-rush, Krieskern's	Monocot	5	Threatened
Bear, Grizzly	Mammal	28	Threatened
Bear, Louisiana Black	Mammal	80	Threatened
Birds-in-a-nest, White	Dicot	1	Threatened
Bladderpod, Lyrate	Dicot	2	Threatened
Bladderpod, Missouri	Dicot	6	Threatened
Blazing Star, Ash Meadows	Dicot	1	Threatened
Blazing Star, Heller's	Dicot	4	Threatened
Bluecurls, Hidden Lake	Dicot	3	Threatened
Bonamia, Florida	Dicot	25	Threatened
Brodiaea, Chinese Camp	Monocot	1	Threatened
Brodiaea, Thread-leaved	Monocot	16	Threatened
Buckwheat, Scrub	Dicot	18	Threatened
Buckwheat, Southern Mountain Wild	Dicot	3	Threatened
Butterfly Plant, Colorado	Dicot	3	Threatened
Butterweed, Layne's	Dicot	4	Threatened
Butterwort, Godfrey's	Dicot	1	Threatened

Cactus, Bunched Cory	Dicot	1	Threatened
Cactus, Chisos Mountain Hedgehog	Dicot	1	Threatened
Cactus, Cochise Pincushion	Dicot	1	Threatened
Cactus, Lloyd's Mariposa	Dicot	2	Threatened
Cactus, Mesa Verde	Dicot	2	Threatened
Cactus, Siler Pincushion	Dicot	4	Threatened
Cactus, Uinta Basin Hookless	Dicot	5	Threatened
Catchfly, Spalding's	Dicot	9	Threatened
Ceanothus, Vail Lake	Dicot	3	Threatened
Centaury, Spring-loving	Dicot	1	Threatened
Checker-mallow, Nelson's	Dicot	8	Threatened
Chumbo, Higo	Dicot	1	Threatened
Clarkia, Springville	Dicot	4	Threatened
Clover, Fleshy Owl's	Dicot	21	Threatened
Clover, Prairie Bush	Dicot	76	Threatened
Cobana Negra	Dicot	5	Threatened
Crownbeard, Big-leaved	Dicot	6	Threatened
Cycladenia, Jones	Dicot	3	Threatened
Cypress, Gowen	Conf/cycds	4	Threatened
Daisy, Lakeside	Dicot	5	Threatened
Daisy, Parish's	Dicot	6	Threatened
Dudleya, Conejo	Dicot	4	Threatened
Dudleya, Marcescent	Dicot	11	Threatened
Dudleya, Santa Cruz Island	Dicot	4	Threatened
Dudleya, Santa Monica Mountains	Dicot	11	Threatened
Dudleya, Verity's	Dicot	4	Threatened
Dwarf-flax, Marin	Dicot	3	Threatened
Elimia, Lacy	Gastropod	1	Threatened
Evening-primrose, San Benito	Dicot	3	Threatened
Fairy Shrimp, Vernal Pool	Crustacean	80	Threatened
Fatmucket, Arkansas	Bivalve	3	Threatened
Fern, Alabama Streak-sorus	Ferns	1	Threatened
Fern, American hart's-tongue	Ferns	8	Threatened
Fleabane, Zuni	Dicot	2	Threatened
Four-o'clock, Macfarlane's	Dicot	1	Threatened
Fruit, Earth (=geocarpon)	Dicot	7	Threatened
Gesneria pauciflora (ncn)	Dicot	2	Threatened
Goldenrod, Blue Ridge	Dicot	2	Threatened
Goldenrod, Houghton's	Dicot	7	Threatened
Goldenrod, White-haired	Dicot	1	Threatened
Gooseberry, Miccosukee	Dicot	4	Threatened
Grass, Colusa	Monocot	17	Threatened
Grass, San Joaquin Valley Orcutt	Monocot	24	Threatened
Grass, Slender Orcutt	Dicot	13	Threatened
Groundsel, San Francisco Peaks	Dicot	1	Threatened
Gumplant, Ash Meadows	Dicot	1	Threatened
Haha ( <i>Cyanea recta</i> )	Dicot	4	Threatened
Halwale ( <i>Cyrtandra limahuliensis</i> )	Dicot	4	Threatened
Heartleaf, Dwarf-flowered	Dicot	10	Threatened
Heather, Mountain Golden	Dicot	2	Threatened
Howellia, Water	Dicot	8	Threatened
Iris, Dwarf Lake	Monocot	11	Threatened
Isopod, Madison Cave	Crustacean	3	Threatened
Ivesia, Ash Meadows	Dicot	1	Threatened
Joint-vetch, Sensitive	Dicot	16	Threatened
Kolea ( <i>Myrsine linearifolia</i> )	Dicot	4	Threatened
Ladies'-tresses, Ute	Monocot	9	Threatened

Liveforever, Laguna Beach	Dicot	3	Threatened
Locoweed, Fassett's	Dicot	2	Threatened
Lupine, Kincaid's	Dicot	7	Threatened
Lynx, Canada	Mammal	20	Threatened
Makou ( <i>Peucedanum sandwicense</i> )	Dicot	11	Threatened
Manaca, palma de	Monocot	6	Threatened
Manzanita, lone	Dicot	3	Threatened
Manzanita, Morro	Dicot	3	Threatened
Manzanita, Pallid	Dicot	3	Threatened
Milk-vetch, Ash Meadows	Dicot	1	Threatened
Milk-vetch, Deseret	Dicot	1	Threatened
Milk-vetch, Fish Slough	Dicot	2	Threatened
Milk-vetch, Heliotrope	Dicot	3	Threatened
Milk-vetch, Pierson's	Dicot	3	Threatened
Milkweed, Mead's	Dicot	27	Threatened
Milkweed, Welsh's	Dicot	1	Threatened
Monkshood, Northern Wild	Dicot	16	Threatened
Mouse, Preble's Meadow Jumping	Mammal	11	Threatened
Mouse, Southeastern Beach	Mammal	9	Threatened
Mucket, Orangenacre	Bivalve	8	Threatened
Mussel, Alabama Moccasinshell	Bivalve	12	Threatened
Mussel, Fine-lined Pocketbook	Bivalve	24	Threatened
Mussel, Heelsplitter Inflated	Bivalve	9	Threatened
Navarretia, Spreading	Dicot	10	Threatened
Oak, Hinckley	Dicot	2	Threatened
Orchid, Eastern Prairie Fringed	Monocot	67	Threatened
Orchid, Western Prairie Fringed	Monocot	87	Threatened
Paintbrush, Ash-grey Indian	Dicot	3	Threatened
Paintbrush, Golden	Dicot	3	Threatened
Pearlshell, Louisiana	Bivalve	2	Threatened
Pink, Swamp	Monocot	25	Threatened
Pogonia, Small Whorled	Monocot	72	Threatened
Potato-bean, Price's	Dicot	16	Threatened
Prairie Dog, Utah	Mammal	3	Threatened
Primrose, Maguire	Dicot	1	Threatened
Pussypaws, Mariposa	Dicot	9	Threatened
Rocksnail, Painted	Gastropod	4	Threatened
Rocksnail, Round	Gastropod	1	Threatened
Rosemary, Cumberland	Dicot	6	Threatened
Roseroot, Leedy's	Dicot	5	Threatened
Rush-rose, Island	Dicot	4	Threatened
Sandwort, Bear Valley	Dicot	3	Threatened
Schiedea sperrulina var. sperrulina (ncn)	Dicot	4	Threatened
Schoepfia arenaria (ncn)	Dicot	3	Threatened
Seagrass, Johnson's	Monocot	18	Threatened
Sedge, Navajo	Monocot	3	Threatened
Shagreen, Magazine Mountain	Gastropod	1	Threatened
Shrimp, Squirrel Chimney Cave	Crustacean	3	Threatened
Silene hawaiiensis (ncn)	Dicot	4	Threatened
Silversword, Haleakala ('Ahihahina)	Dicot	8	Threatened
Skullcap, Large-flowered	Dicot	7	Threatened
Slabshell, Chipola	Bivalve	3	Threatened
Snail, Bliss Rapids	Gastropod	6	Threatened
Snail, Chittenango Ovate Amber	Gastropod	1	Threatened
Snail, Flat-spired Three-toothed	Gastropod	2	Threatened
Snail, Newcomb's	Gastropod	4	Threatened
Snail, Noonday	Gastropod	1	Threatened

Sneezeweed, Virginia	Dicot	4	Threatened
Spineflower, Monterey	Dicot	7	Threatened
Spiraea, Virginia	Dicot	36	Threatened
Spurge, Garber's	Dicot	3	Threatened
Spurge, Hoover's	Dicot	23	Threatened
Spurge, Telephus	Dicot	1	Threatened
Squirrel, Northern Idaho Ground	Mammal	1	Threatened
Sunflower, Pecos	Dicot	2	Threatened
Sunray, Ash Meadows	Dicot	1	Threatened
Tarplant, Otay	Dicot	3	Threatened
Tarplant, Santa Cruz	Dicot	8	Threatened
Tetramolopium rockii (ncn)	Dicot	4	Threatened
Thelypody, Howell's Spectacular	Dicot	3	Threatened
Thistle, Pitcher's	Dicot	33	Threatened
Thistle, Sacramento Mountains	Dicot	1	Threatened
Thommint, San Diego	Dicot	3	Threatened
Townsendia, Last Chance	Dicot	2	Threatened
Vervain, California	Dicot	1	Threatened
Water-plantain, Kral's	Monocot	3	Threatened
Whitlow-wort, Papery	Dicot	14	Threatened
Wings, Pigeon	Dicot	10	Threatened
Yellowhead, Desert	Dicot	1	Threatened

**No species were selected for exclusion.**

**Dispersed species included in report.**